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Worldwide Report

ENVIRONMENTAL QUALITY

No. 366

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30 August 1982

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CONTROLS NEEDED ON SALE, USE OF AGROCHEMICALS

Kuala Belait BORNEO BULLETIN in English 3 Jul 82 p 12

[Excerpts]

BANDAR SERI BEGAWAN. — The uncontrolled use of weed-killers and other dangerous agricultural chemicals in Brunei is a serious health threat.

Laws are urgently needed to protect the public, says the Brunei Chemical Society.

The professional body has called for the setting up of a government committee to consider legislation to stringently control the sale and use of agrochemicals, as they are termed.

At the same time, a hospital specialist has urged that an alternative be found to the herbicide Gramoxone.

This Paraquat-based substance kills more people in the state every year than any other poison.

"If there can be an alternative to Gramoxone, we would be very grateful," Dr John Boyd, specialist cardiologist at Bandar Seri Begawan General Hospital, told a seminar held by the society in the capital last Sunday.

Gramoxone causes up to eight deaths a year in Brunei and there are possibly others not reported, he said. Anything over 5cc of this fluid is fatal and most cases

seen by doctors are suicide.

Other deaths have been recorded in this region of people who have swallowed the dark liquid mistaking it for black coffee or another beverage, sarsparilla.

An example of a chemical mishap was revealed at the seminar by Dr Boyd.

Ten padi workers from the Wasan rice growing project were admitted to Bandar Seri Begawan General Hospital last December and detained overnight suffering mainly anxiety symptoms.

They had been spraying crops with a mercury-based chemical but had removed their protective masks as it was a hot day.

High levels of mercury

showed up in urine samples taken from three of the men.

The new laws would also be aimed at enforcing safety standards for the handling and application of insecticides and the disposal of unwanted toxic chemicals.

"At the moment there is no legislation to control the sale or use of these substances and anybody can buy them over the counter," Awang Majid bin Haji Abdul Rahman, the chairman of the seminar committee told the Bulletin.

"We are particularly worried about people who have had no training in crop spraying, from illiterate farmers to plot owners and gardeners."

The society is also anxious that safeguards are

taken to protect the public from the danger of residual build-up of pesticides in crops and food supplies.

The Brunei Senior Medical Officer of Health, Dr P. Durayappah, told the seminar: "some commercial preparations presently used by farmers and available to the general public, are extremely toxic and lethal to humans."

The seminar also recommended that a pesticide residue analysis centre be set up at Kilanis Agriculture Research Station to monitor crops.

There are 32 types of agrochemicals in use in Brunei, of which only four have been categorised as "safe."

The others range from "relatively safe" to "extremely hazardous".

CSO: 5000/8013

NEW ZEALAND

BRIEFS

COAL MINING THREAT TO FARMLAND--Alternative energy resources should be fully evaluated before productive farmland is laid waste by large scale coal mining, Federated Farmers annual conference said yesterday. The conference recommended that the full potential of renewable resources such as farm scale biogas plants and rape seed oil, hydro development and the non-renewable resource of shale deposits be fully researched and assessed before final decisions on mining were made. Mr O. McStay, president of the Southland branch presented the resolution and said planned lignite mining in Southland could cover 2000 to 3000 hectares and reach 300 metres deep. Working through a topsoil of just 18 cm or so coal extractors would find great difficulty in reinstating farmland after the mines were exhausted, he said. Many mines would reach far below sea level and would upset natural water tables in many areas. Mr McStay said the social implications of large scale mining in Southland had not been adequately considered. [Text] [Wellington THE EVENING POST in English 22 Jul 82 p 17]

CSO: 5000/9075

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

GUANGXI NATIONAL POLLUTION CONFERENCE--The Science and Technology Bureau of the Ministry of Commerce recently held a national conference on research work in preventing pollution of food grain and oil in Nanning. According to research theses, our country has done a good job of studying pollution of food grain and oil. Since the State Scientific and Technology Commission called for attaching importance to preventing pollution of food grain and oil in 1976, the Ministry of Commerce has launched many investigations and scientific examinations and has a basic understanding of the pollution situation in our country. The regional research center for preventing pollution of food grain and oil has inspected 18 types of grains and oil and taken 1,900 samples, and some effective measures were formulated.
[Nanning Guangxi Regional Service in Mandarin 1130 GMT 13 Jul 82 HK]

CSO: 5000/4066

VIETNAM

ENVIRONMENTAL PROTECTION TOP PRIORITY IN INDUSTRIAL CONSTRUCTION

Hanoi KHOA HOC VA DOI SONG in Vietnamese 16 Jun 82 p 3

[Article by Quoc Truong of the Ministry of Construction: "Environmental Pollution During Industrial Construction"]

[Text] At the present time the question of protection of the ecological environment constitutes the center of attention and cooperative efforts by many countries and international organizations, it is being studied and has become an important and urgent requirement in the world.

In industrial production, environmental protection consists of the treatment of effluent waters, poisonous gases, the reduction of heat, smog, dust and noise meant to create a healthy and less polluted environment for labor and other activities in the industrial zones near civilian populations in the cities and to insure ecological balance in nature.

Industrial production in our country, although still at its beginnings, has nonetheless created pollution in the populated areas surrounding it at variable levels because we have not in the past paid attention to the life environment, because we have not had devised ways to set up rational planning and blueprinting, and because our industrial processes are still backward, on top of which we also have not made appropriate investments into waste treatment works.

Actual investigations have revealed that all the plants built before 1954 are located where the wind blows strongest or at the source of water streams, leaving no healthy distance in between the plants and the populated areas, they are not equipped with dust and poisonous gas elimination equipment or with industrial effluent treatment stations, thus causing pollution to the living environment.

In Nam Dinh City, the textile and silk combined plants and the power plant are right in the middle of the main population area; the smog and dust coming from the power plant, the coal dust that rises as coal is being transported into the plant, the cotton dust of the spinning and textile mills, the poisonous gases and highly poisonous effluents of the dying plant, plus the various plant noises have polluted half of the city. When the city was enlarged we built some more plants, the milling plant, the fruit canning plant, and the POL warehouses right next to the populated areas and even where the main winds blow, which only added to the pollution already obtaining in the city. In Haiphong City, the older plants which had been built close to the populated areas or right in their midst such as the cement and the power plants, not only helped pollute the air in the

city, they also contribute to polluting the air of hamlets and villages that may be as far away as 4 or 5 kilometers in the direction of the winds. The Yen Phu power plant in Hanoi yields daily an enormous amount of coal dust which covers a whole vast area of the city.

In the southern cities, before Liberation the situation of environmental pollution was also relatively serious. In Dalat, the irradiated waste waters do not get treated well before they are returned to the streams. The Tham Luong Canal in Ho Chi Minh City, which is 6.5 kilometers long, is polluted by the effluents of the plants found in the Bien Hoa industrial park; in particular, mercury has been discovered in the effluents of a plant division at the level of 1.73 to 3.65 mg/l, which is a content level extremely dangerous to the life environment of the surrounding area.

In the case of the plants and enterprise complexes and industrial parks built after 1955 in the northern part of our country, the level of environmental pollution also presents many problems that need attending to.

The rubber, soap and tobacco enterprise complex of Thuong Dinh (Hanoi) is a source of pollution affecting the whole area surrounding the complex: neither the poisonous gases, the smog or the industrial effluents get treated.

The thermoelectric plant of Ninh Binh is located where the prevailing wind originates in the town and lies in the cyclone area of the Canh Dieu mountain, yet it is not equipped with dust eliminating equipment, which makes that the density of dust in the whole area is quite high.

There is also the situation where in an industrial park the smog, poisonous gases and effluents coming from the various plants become mutual pollutants and affect negatively the life environment. For instance, in Viet Tri the poisonous fumes coming from the chemical plant and the smog coming from the power plant affect all the other plants in the industrial park and the entire populated area of the city.

In Thai Nguyen, the Cau River section about 4 or 5 kilometers upstream from the city where we have the effluents of the Hoang Van Thu paper mill and of the Cao Ngan power plant is clearly polluted, thus polluting the entire stream, causing the marine life of this whole section, both the surface and shallow life forms and the bottom animal zoomorphs, to be stunted and the plant life to develop in very poor fashion.

The cause of the above pollution situation is that we do not yet have solutions for rational distribution of industrial plants. Many of our dangerous plants and enterprise complexes are set up where the prevailing winds blow, put in between an industrial park area and a populated area; in between the plants that produce dangerous pollutants and those which do not there is no distance allowed that may be necessary. On the other hand, practically all our plants now are run with backward industrial processes and they are not equipped with dust and poisonous gas elimination devices. In a small number of plants that are equipped with such devices, the level of pollution caused by them has been reduced significantly. For instance, the Uong Bi power plant, thanks to the fact that it is equipped with dust elimination devices, with tall smoke stacks and set up at the dying edge of the prevailing winds, has been able to insure that they workers quarters which are

located right by it enjoy pure air. The Hoang Thach cement plant, according to the plans, is equipped with dust filtering equipment which makes it that there is now less than 300mg of dust in 1 cubic meter of air, which is a level of negligible influence on the surrounding environment.

In actuality, the establishment of industrial plants is usually detrimental to the requirements for protection of the life environment. To solve such contradictory requirements constitutes a complex issue that requires the comprehensive and simultaneous study by many related sectors and also an appropriate level of investment by the state. Whenever we are setting up a plant, an enterprise complex, or a new industrial park, we must pay attention to the following essential questions:

1. To rationally solve the relationship between the industrial park and the population areas so as to insure non-polluted air for the latter, to insure a minimal density of dust and gases under the allowable guidelines.
2. To protect the water sources, both the underground and the surface water sources, so that they do not get polluted by the industrial effluents. The poison-containing industrial effluents must at all cost be treated before they could be allowed access into the rivers, lakes or fields.
3. To reduce the noise level created by the activities of industrial production or by the means of transportation used in the industrial park.
4. To keep the ecological balance in nature, to protect the vegetal carpet, the various species of animals living in the water or on the land, to protect natural beauty areas and historical sites.

In the case of existing plants, enterprise complexes and industrial parks, we must study improvement solutions that are appropriate such as: to plant and plan for intercalating green trees, to improve upon the industrial processes and to set up equipment meant to eliminate dust, poisonous gases, to treat industrial effluents, so as to reduce the pollutant sources and gradually clean up the environment.

The protection of the environment is an urgent requirement that has national and international implications, it must be the object of combined studies by various related sectors so as to yield a solution. The industrial construction sector, through its creative labor and high sense of responsibility, must contribute its active share to this work through plans and blueprints that are drafted with greater quality, thus answering the requirement of a progressive industry and helping conserve the environment.

1751
CSO: 5000/5780

GERMAN DEMOCRATIC REPUBLIC

CLOSE EAST-WEST COOPERATION ON ENVIRONMENTAL ISSUES ADVOCATED

East Berlin DEUTSCHE AUSSENPOLITIK in German Vol 27 No 7, Jul 82 (signed to press
7 Jun 82) pp 103-114

/Investigations and Surveys' feature article by Dr Carola Kotyczka and Dr Horst Paucke, GDR Academy of Sciences: "Cooperation in Environmental Protection--Contribution to Peaceful Coexistence" /

/Text/ When we investigate the reason why environmental problems evoke such a broad international response in our day, the fact emerges that involved here are very real and serious problems for mankind. We are not simply concerned here with the protection of the natural environment but with the preservation of nature for man and, consequently, the protection of man himself, in other words the preservation, not the disruption of the organic and social form of the movement of matter.

Indeed, mankind now is exposed to many perils threatening it as the result of uncontrolled technical development as well as the thoughtless and planless use of nature. These perils are bound to grow with the years, unless a reasonable collective solution is found by planned international cooperation.

The global importance of environmental issues is apparent also in economic terms. This is due to the fact that every single national economy depends not only on the state of its "own" natural environment but, to a growing extent, on the state of the worldwide ecological system. As environmental issues are internationalized, the question of the "ecological security" of the peoples arises. It reflects the justified endeavor of every country to defend itself against damage that might be caused to its environment and to the health of its people by the actions of other countries. The concluding communique of the 1975 Helsinki Conference on Security and Cooperation in Europe (CSCE) therefore included the provision that every attending country "should take care to ensure that operations within its territory do not cause the deterioration of the environment in another state or in regions outside its national sovereignty."¹ This conference represented an important step toward the establishment of detente and smoothed the way toward the resolution of the most acute ecological problems of our age. Its recommendations offer a platform of cooperation between socialist and capitalist countries for many years to come. Of course such cooperation can be realized only on the basis of the principle of peaceful coexistence. The 10 principles of the final communique are the foundation stones. Moreover, every step forward achieved in the common resolution of acute problems for mankind as a whole is a confirmation and reinforcement of the principles of peaceful coexistence, contributes in general to the emergence of peaceful coexistence as the

precondition for coping with the current and future problems of mankind. Lenin's conception of peaceful coexistence leads us to understand the dialectic of peaceful coexistence and environmental control at the present time.

On Lenin's Conception of Peaceful Coexistence

As we all know, Lenin concluded from the new historical conditions of imperialism that it was an inevitable necessity to insist on firm and stable relations with the capitalist world, especially in the realm of the economy. The early "decree on peace" set the foundation stone for constructive cooperation with capitalist countries. Socialism therefore showed even at the very hour of its emergence that it is interested in the equal and mutually beneficial cooperation between countries of different social systems. These considerations represent the essential nature of Lenin's conception of the peaceful coexistence of peoples and aim at creating favorable external conditions for the construction and consolidation of socialism as well as for the progressive social transformation of the world.

Here we also have the profound revolutionary meaning of Lenin's peace strategy reflected in the practical international actions of the USSR and all other socialist countries. This strategy includes elements of cooperation, competition and ideological conflict and takes account of the historical nature of the worldwide transition from capitalism to socialism, characterized by highly complex and contradictory international relations.

It would therefore be wrong to expect peaceful coexistence to remove the main contradictions of our era. In fact the socialist transformation of mankind advances, but it is not an immediate occurrence but a long lasting historical process. The actual process of positive changes emerging in current international relations, especially in the 1970's, did certainly result in some detente at international level. In his interview with a correspondent of the American news magazine TIME, L.I. Brezhnev stressed:

"Detente signifies the readiness to settle differences of opinion and disputes not by violence, threats and sabre rattling but by peaceful means, at the negotiating table. Detente implies a certain confidence² and the ability to take into consideration the legitimate interests of the other."

In view of the prevalence of modern means of mass destruction, use of which could already destroy mankind several times over, peaceful coexistence is mainly directed to the prevention of a global military disaster. This goal has generally humanist and revolutionary significance because communism cannot be indifferent to the aspect of the planet once it belongs to it exclusively. Lenin commented this quite unequivocally:

"An end to wars, peace among the peoples, the cessation of robbery and violence--that is truly our ideal."³

As early as 1918, upon reflecting on the nature of war and on the future, Lenin said:

"Modern technology makes war more and more devastating. The time will come when war acquires such destructive powers as to become totally impossible."⁴

It seems that this time has come. Soviet scientist Aleksandr Bovin regards this as the crucial junction where the interests of capitalist and socialist countries intersect:⁵ Of capitalist interests because, despite its own adventurism, the bourgeoisie is not inclined to sign its own death warrant; of socialist interests because socialist external policy is basically determined by the need to sustain and secure peace on earth and is guided by the principle of revolutionary humanism. This line of peaceful coexistence is unassailable and will continue to represent the only reasonable and realistic framework for the continued existence of mankind in a world of social upheaval.

Arms Damage Man and Nature

At the present time Western confrontation politicians leave no stone unturned to "ruin the economies" of the Soviet Union and its allies "by means of the arms race."⁶ They hope thereby to obtain military and strategic advantages.⁶ The concept of "ruining the economies by means of the arms race" means the development of weapons systems that require counter systems for defense--likely to be far more expensive. Computations by the U.S. Defense Department, for example, showed that the production of 2,000 winged missiles at a total cost of \$1.5 billion would call for effective countermeasures requiring an expenditure of \$13 billion. Over and over again the attempt is made to compel the socialist countries to shoulder immense defense burdens in order for as long as possible to prevent the full development of the socialist production method and obstruct the improvement of the working people's standard of living. In terms of the economy arms expenditure and arms production represent a loss for all societies and restrict the productive potential in every respect, in socialism as well as in capitalism.⁷

The working people in capitalism notice the effects of rearmament by increased taxes, inflation, unemployment and other social hardships. In terms of the economy arms production always means the circulation of resources (manpower, raw materials) outside the productive sphere; they have no productive effect either as means of production or as means of consumption and therefore escape the economic circulation. As a consequence rearmament decreases the social product and narrows the reproduction process by the unproductive consumption of the national product. By now the capitalist countries have 30 million unemployed, although rearmament there is at full strength. We have evidence that this is due to the fact (among others) that the arms industry is among the most capital intensive and least labor intensive industries. Actually American sources disclose that \$1 billion spent on arms provide only 35,000 jobs, spent in civilian industries 60,000 jobs, in mining 75,000 jobs and in the public service 130,000 jobs. A cut in the arms programs and the channelling of investments to other sectors of the economy would thus willy nilly result in a rise in employment and a reduction in unemployment.

Moreover, a considerable part of the raw materials annually used by the international arms industry could be utilized for nationally productive purposes. At stake here are rare and valuable raw materials, 13 of which the U.S. Interior Department has included in the list of strategic raw materials (aluminium, chromium, copper, iron, lead, magnesium, nickel, phosphorus, potash, sulfur, tin, tungsten and zinc). Their return to civilian use would result at one and the same time in a certain easing of the raw materials and the energy situation that now presents increasing

difficulties on a global scale. The arms industry is currently among the major raw materials and energy consumers worldwide. Furthermore it damages the natural environment, because arms manufacture produces some particularly injurious emissions. At the present time rearmament has assumed giant proportions and amounts to more than 6 percent of the gross global product (the total of all the world's national products). According to the proposals of the current U.S. Administration this total is to rise even higher, because the intention is for the United States alone in the coming 5 years to spend \$1.5 trillion on arms. In 1981 former U.N. General Secretary Kurt Waldheim reported global arms expenditures to amount to \$600 billion. A reduction in this sum would be beneficial for the environment in every respect. It would also free sufficient financial resources for carrying out the U.N. programs on global issues for mankind, such as were enacted at the 1974 World Population Conference, the 1974 World Nutrition Conference, the 1975 World Settlement Conference, the 1977 World Water Conference, the 1977 World Desert Conference and the 1981 World Energy Conference. The implementation of the programs for action elevates peaceful coexistence to an objective need of the peoples, and in the nuclear age there is simply no reasonable alternative.

Disarmament Initiatives for the Protection of Man and Nature

The Soviet Union has submitted more than 100 concrete proposals to the world public in order to liberate mankind from the scourge of a world war and the burden of arms expenses. Over and over again the socialist countries have kindled new impetus for the peaceful coexistence of the peoples, and these provided a vital contribution to the convocation of the second Special U.N. Conference on Disarmament (1982). The 1959 Antarctica Convention was a significant step toward disarmament; it bans all military operations in this region. It was followed by the Moscow Convention on the Ban of Nuclear Weapons Tests in the Atmosphere, in Space and Underseas (1963); this stipulated that underground tests may not be conducted if they cause radioactivity to be released outside the sovereign territory of the testing country. The World Space Convention (1967) includes principles for the peaceful exploration and utilization of space. It bans the launching of satellites carrying agents of mass destruction as well as military operations on other heavenly bodies. The conclusion of the Convention on the Nonproliferation of Nuclear Arms (1968) limited the danger of nuclear weapons being left outside the scope of negotiations. Taking into account the actual international balance of strength and on a proposal of the Soviet Union, a convention was concluded in 1971 concerning the ban on the emplacement of nuclear arms and other weapons of mass destruction on and below the bottom of the sea. The 1972 Convention on the Ban on the Development, Manufacturing and Storage of Bacteriological (biological) and Chemical Weapons and their Destruction was also based on Soviet suggestions and draft treaties. The range of scientific-technological agents and methods for military effects on the environment emerges from the Soviet draft convention on environmental control, submitted and explained by the USSR as long ago as the 29th U.N. General Assembly Meeting (1974). Article 2 points out 12 possibilities for adversely affecting the environment; it is not possible within the scope of this article to deal with them in detail.

The Soviet proposal started from the appreciation that the advances of science with respect to the artificial influence exercised on environmental processes for peaceful purposes may also be used and abused for military ends. Moreover, science and technology are still in their infance with regard to this field, so that even any

testing of such methods would involve an undue hazard. The military use of agents to affect the environment could trigger worldwide natural disasters and, for example, irreversibly change the climate. The ban on the military misuse of the environment builds upon many existing bans of certain types of the conduct of war and the use of certain weapons; it aims mainly at the erection of new and additional international barriers to either make difficult or totally impossible the use of such methods. At the 31st U.N.General Assembly Meeting (1976) the USSR submitted a "memorandum on the cessation of the arms race and on disarmament." Here the Soviet Union developed several new initiatives to restrain the arms race. One of the most significant concrete results of this U.N.General Assembly Meeting was the recommendation to all countries to sign and ratify the convention on banning military and other hostile effects on the environment. This represented a major step forward in the realization of the proposal to ban environmental war, submitted by the USSR in 1974. The 31st U.N.General Assembly Meeting also established such priorities for the future work of the space committee as the preparation of a moon convention (1971 USSR proposal) and the drafting of principles for the remote exploration of the earth by satellites (remote sensing). In coordination with the other socialist countries the latest proposal by the Soviet Union was put forward in 1980, to the 35th U.N. General Assembly Meeting. It aimed at preventing the continuing threat to nature caused by the arms race. The draft resolution submitted on the "historical responsibility of nations for the preservation of nature for present and future generations" was debated at the same time as a draft "world charter for nature," submitted by Zaire. On this basis the U.N.General Assembly decided to draft a report to the second special disarmament conference on the opinions, suggestions and measures of states for protecting nature against the destructive effects of the arms race.

The conclusion of the CSCE (1975) represented a first in the history of this continent. Agreements were achieved, that provide a basis for a life in peace and for all-round, reciprocally beneficial relations among various nations. Within the framework of these agreements a program was drafted on cooperation in the field of the protection and improvement of environmental conditions and for the rational use of natural resources. The states participating in Helsinki agreed to translate this program into action at a bilateral and multilateral level and using earlier programs, forms and structures of international cooperation. This served to solidify the "material fabric" (L.I. Brezhnev) of detente. The final Helsinki Communiqué offers a sound foundation for more precisely defining and fixing the directions of joint actions in environmental control, deciding a group of concrete projects as well as coordinating and synchronizing the many programs and measures of various international organizations in the ecological field.⁸

The socialist countries are steadily continuing to do everything possible quickly to arrive at concrete measures and implement the agreements concluded in Helsinki. Only 1 year later, the Bucharest Conference of the Warsaw Pact countries political advisory council passed a declaration on cooperation in the fields of environmental control, traffic and energy at an all-European level. This proposal also provided for the use of existing experiences in these fields, especially within the scope of the ECE. As far back as the early 1950's that commission had concerned itself with the drafting of programs for combating water pollution and for the utilization of water resources. In the early 1970's the range of environmental problems to be considered expanded substantially and, by the mid-1970's, had assumed such dimensions that the

many tasks could no longer be tackled and solved one by one but only as a comprehensive whole. This applies most of all to such issues as involve air pollution, the surveillance of the emission of toxic chemicals and wastes into the atmosphere, the development of methods for the creation of national standards for the protection of natural resources, the assessment of economic damage, the development of an information system on environmental problems and other issues.⁹

Unfortunately the ECE does not have its own research institutions. It therefore maintains close links with other U.N. organizations. Particularly important in this context are the senior advisers of the ECE member countries, who represent their governments environmental policies vis-a-vis the ECE. The GDR concentrates its co-operation mainly on such issues as the development of low waste technologies, waste recovery, the desulfurization of coal, noxious substance measurement and the economic evaluation of environmental damage.

Cooperation in Europe is extremely important because this continent has a special role in the world in terms of economics and defense. Moreover, due to its history, it boasts an exceptional density of national states. As a consequence many physical-geographical regions and natural resources forming an ecological unit (air space, river systems, mountain ranges, and so on) are divided by national frontiers. This generates a tremendous responsibility of the European countries for a common and coordinated environmental policy that takes into account the integrity of natural geographic conditions. If for no other reason than their mutual interests, the European countries are bound to feel jointly responsible for this common heritage. If they fail to do so, if the historically grown system of many ecological interrelations and reciprocal dependencies is deliberately or negligently disrupted, national ecological problems may easily and quickly turn into international and all-European problems. This space-and-time dependence represents a certain specificity of our densely settled and much industrialized Europe, and this in turn offers an enormous challenge to international cooperation.¹⁰

A good example is offered by cooperation for the protection of the Baltic. This project could be tackled only once certain problems of international politics in Central Europe had been settled. The convention signed in Helsinki in 1974 is the first in international practice to ban or restrict the pollution of the sea by untreated industrial and municipal sewage that is carried to sea by rivers, by oil and other discharges from ships that are toxic for the ocean environment as well as by the dumping of toxic production waste. On the other hand, the lack of success regarding the realization of the project for the protection of the Mediterranean is largely explained by the continued tension in the Mideast.

The 34th ECE Conference decided to hold a high-level all-European environmental conference in Geneva in 1979. This decision exercised a beneficial influence. The conference enacted three significant documents, that is one convention and one resolution "on border crossing air pollution across long distances" and a declaration "on technologies low in or free of waste products and the recovery and recycling of waste products." These documents have practical importance for all countries worldwide, because the development and introduction of such technologies aim at avoiding environmental damage and at rationally using natural resources.

Of course greater universal importance than the ECE environmental program belongs to the UNESCO program MAB /Man and the Biosphere/, initiated in 1970. It is the prime object of this international, multilateral and interdisciplinary program to draft scientific bases for the conservation and development of individual ecosystems and the rational utilization of natural resources. MAB considers itself the upholder and organizer of a qualitatively new and long-range integrated approach to research, training and transfer in the field of man-environment relations. It sees itself as a representative international organ with the claim to demolish traditional barriers between natural and social sciences and, from the outset, to involve state and economic organs in the ascertainment, processing and solution of problems. The GDR has always actively cooperated in programs of the UNESCO system, including MAB, and has concentrated on key issues.

In 1977 the coordination council evaluated this program and stated that the 14 MAB research projects had advanced to the stage of realization thanks to the cooperation of 87 national committees. An important result of this program is the network of control zones for the biosphere, created with the participation of 29 states; there are now more than 120 such zones.¹¹ At the 1977 Moscow regional conference of their national committees handling the program "man and biosphere," the socialist countries discussed the question how to organize cooperation with the appropriate CEMA organs.

CEMA has had a comprehensive program since 1974, concerned with the control and improvement of the environment as well as the rational utilization of natural resources. It is divided into 11 major problem groups and deals with a total of 155 topics and offers a sound base for constructive and successful cooperation in UNESCO's MAB program. This program's significance for the peaceful coexistence of the peoples was emphasized at the above mentioned Moscow regional conference of the socialist countries.

The work carried on within the scope of the UNSCO program "man and the biosphere" also represents the starting point of many actions initiated by the U.N.Environment Program (UNEP). This program is the practical outcome of the Stockholm Environment Conference (1972) and was adopted by the 27th U.N.General Assembly. UNEP's main function is that of persuading the various governments to devote the appropriate attention to environmental issues. It is a planning and coordinating organ that does not itself carry out any scientific work on environmental problems but stimulates and financially aids such work. Financial assistance to research projects is extended mainly to topical ecological problems of a global nature, resolution of which is in the interest of mankind as a whole. As all global problems of mankind have ecological aspects, it is obvious that the U.N.environment program has been very broadly based and involves many other U.N.technical organs. This includes such special U.N.organizations as the FAO, the WHO, the WMO /World Meteorological Organization/, the IAEA /International Atomic Energy Authority/ and others. UNEP's work has certainly helped the achievement of some successes in such matters as the protection of the seas from pollution, the conservation of genetic resources, the struggle against the advance of the deserts, the choice of locations for industrial plants taking into account environmental considerations, the utilization of water resources, the preservation of ecological conditions in settled areas, and health protection.¹² Moreover it collected valuable experiences with regard to the resolution of international problems of environmental control and passed these on to all

interested countries. UNEP has available an extensive collection of factual material, to obtain which individual interested countries would have to spend considerable sums of money. That is particularly important for developing countries because their environmental problems are growing while they do not have the money required to counter this process. The GDR is actively involved in the work of UNEP. In 1976 it conducted an international symposium on the eutrophication and resuscitation of surface waters on behalf of UNEP. The GDR also pays for part of the UNEP training program at Dresden Technical University. These and other actions are definitely suitable for creating trust among the peoples, to implant and root the ideals of peaceful cooperation among the peoples of our planet.

Much Remains to Be Done

At the present time extremist reactionary imperialist forces endeavor by unilateral and unjustified actions to destroy everything achieved in the course of the 1970's. Basically such actions are nothing new. History knows of earlier attempts to apply economic sanctions and discriminatory measures. All of them were discontinued sooner or later due to their lack of efficacy. That is how it was and still is to this day. Any policy based on military threats and economic sanctions as a means of exerting pressure on the socialist countries is therefore bound to be a totally unsuitable instrument of international relations. It merely serves to worsen the international climate and slow down the rate of detente. All of this confirms Lenin's prediction that "...the struggle for peace..." will "be a difficult and tenacious struggle."¹³ It will still require strenuous efforts to free the resources now senselessly devoted to arms, in order to be able to use them for the resolution of global human issues, including ecological problems. Far too many problems in this field are still unresolved.

For example far too little attention is generally devoted in international cooperation to the implementation of practical measures in the struggle against the pollution of the environment. In other words, the current efforts in the field of the development, production and use of ecologically oriented and relatively low waste techniques and technologies by no means suffice to cope with present-day problems. Other arrears persist in such fields as the establishment of a global environmental monitoring system, the preparation of a methodology for the assessment of the status and development of the environment as well as for the appraisal of natural resources to enable us for a long time ahead to use the "free services of nature."

Closely connected with all this are issues of the environmentally appropriate development of the economy and the organization of lifestyles oriented to the optimum use of the environment and opposed to the waste and misuse of natural resources. Moreover, various countries vary immensely in their norms and standards for the legally admissible maximum values of pollution. Such norms should be internationally standardized. Of course all these issues are closely linked to economic, political, social and other interests. It therefore seems important to achieve international agreements on common strategies in environmental policy and on coordinated principles of the use of nature. They would help consolidate international relations on the basis of international law.

Some quite serious problems arise from the existence of innumerable environmental programs that tend to be no more than loosely connected (if at all). The coordination of ecological tasks is highly complex even within the various U.N.organizations

handling special ecological issues from various aspects. That is so because countries with different social systems and at different stages of economic development tend to set themselves different objectives. In the case of the developing countries, for instance, the question necessarily arises what socio-economic structures to establish so as to ensure the appropriate development of productive forces while fully taking into account the need for the rational utilization of natural resources. Despite all these differences in the targets and approaches to the resolution of environmental problems it will be imperative in future to avoid duplicating the work done, better to exchange the results and more emphatically to point out the directions to be followed at global, regional and subregional level. We must remember that our present "achievements are...not the top limit. Today they may be the maximum possible, tomorrow they must be the starting point of further advances..."!\$

FOOTNOTES

11. DEUTSCHE AUSSENPOLITIK, Berlin 1975, No 9, p 1399.
2. PRAVDA, Moscow, 16 January 1979.
3. V.I. Lenin, Collected Works, Vol 21, p 292.
4. See N.K. Krupskaya, "That Is Lenin," Berlin 1970, pp 67f.
5. See A. Bovin, "Lenin and USSR Foreign Policy," GESELLSCHAFTSWISSENSCHAFTEN, Moscow/Berlin 1981, No 3, p 190.
6. See "Documentation of the USSR Defense Ministry," NEUES DEUTSCHLAND, Berlin, 26 January 1982, 27 January 1982, 28 January 1982, 29 January 1982, 30/31 January 1982.
7. See "Abriistung, Wissenschaft, Verantwortung" /Disarmament, Science, Responsibility/, Berlin 1978.
8. See R.A. Novikov, "The Socialist Community and the International Aspects of Environmental Control," SOWJETWISSENSCHAFT. GESELLSCHAFTSWISSENSCHAFTLICHE BEITRAEGE, Berlin 1978, No 2, p 193.
9. Collective of authors, "Umweltprobleme in der Weltwirtschaft und den Internationalen Beziehungen" /Environmental Problems in the World Economy and International Relations/, Berlin 1981, p 270.
10. See collective of authors, "Europaeische Sicherheit und Zusammenarbeit: Voraussetzungen, Probleme, Perspektiven" /European Security and Cooperation: Conditions, Problems, Outlook/, Berlin 1978.
11. See V. Mikhailov, "Political Problems of Environmental Control," SOWJETWISSENSCHAFT: GESELLSCHAFTSWISSENSCHAFTLICHE BEITRAEGE, Berlin 1979, No 7, p 720.

12. See B. Miroshnichenko, "Ecology--A Sphere of International Cooperation," SOWJETWISSENSCHAFT: GESELLSCHAFTSWISSENSCHAFTLICHE BEITRAEGE, Berlin 1980, No 8, p 829.
13. V.I. Lenin, Collected Works, Vol 26, p 312.
14. L.I. Brezhnev, "Following Lenin's Path," Berlin 1977, Vol 5, p 369.

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POLAND

ENVIRONMENTAL PROTECTION, POLLUTION DESCRIBED

Baltic Sea Pollution

Warsaw ZYCIE GOSPODARCZE in Polish No 15, 2 May 82 p 7

[Article by Krzysztof Fronczak: "Dead Sea"]

[Text] With the attractions of the vacation season near at hand please forgive me for the fact that in this article, instead of praising the beauties of our native landscapes, I will be addressing a subject that is not very pleasant and landscapes that are altogether repugnant. Well, the truth is bitter, and it is certain that a trip to the seacoast, especially to the area around the Bay of Gdansk, is not going to be as pleasant for tourists as they might have hoped and not just because of rising costs. The simple fact of the matter is that this coastline and this bay itself are no longer what they used to be. For the time being we are faced with that ominous calm before the storm, but everyone is well aware of which way the wind, or more properly the water, is blowing, and it is probably only a matter of a few days before the next (annual?) alarm is sounded over what is happening to the Bay of Gdansk. It will only take a few warm sunny days before....

It would be a gross misstatement of the facts to write about the disastrous pollution of the waters and beaches in this bay simply because hoards of fun-seeking beachcombers won't have anywhere to sun themselves or to go swimming. Anyway, yellow signs telling people that swimming is prohibited were put up last year in two hundred places, not only along the shores of Gdansk and Puck bays, but also along many beaches of the Central Coast. This is a much broader and more serious problem. Unfortunately, we have gradually grown accustomed to dealing with it only when the tourist season hits. And yet this is not a subject that could be classified as an example of "off-season" journalistic sensationalism.

This is not a new problem. The first beach in Puck was closed 10 years ago. This was a warning signal that was ignored at the time. The voices that were being raised by ecologists could not penetrate the wall of indifference. At the time it seemed as though "things would work out somehow or other" and that nature would heal itself. But still things went from bad to worse. The shallow and sun-warmed Bay of Puck, which was once renowned for its submarine pasturelands where pike, eels, and lavarets thrived, was slowly

transformed into a foul-smelling cesspool. The Bay of Gdansk was the next victim of this poisoning process. It was with alarm that people began to notice that similar things were happening in the Bay of Szczecin and along the Central Coast. "The Report on the State of the Environment" which was recently published by the National Environmental Protection Council of the Council of Ministers, mentions the Bay of Gdansk as an area that has been subjected to especially heavy ecological degradation. But one should begin by noting that the entire Baltic--a sea area closed off by narrow straits--should not be treated as a garbage dump. It may take as much as 30 years for all the water in this sea to be replaced, but injections of fresh water flowing into the Baltic through the Danish Straits are rather rare. In comparison with the inshore areas of this sea where the changes brought about by the dumping of toxic wastes are all too visible, the degradation of the open sea environment takes place slowly. But, given our present capabilities as polluters, the Baltic is a rather large and spacious reservoir. However, we realize that it will be just as hard to regenerate this environment.

According to a report prepared by a department of the Gdansk Institute for Environmental Management, we are now in the midst of a phase marked by the occurrence of gradual changes in the Baltic ecosystem that are leading to a reduction in the number of living organisms and the elimination of valuable species as a result of an infestation of "weeds." The Bay of Gdansk and all of Poland's coastal waters are now in this phase of development, and this is having a strong impact already on conditions in the open waters of the southern Baltic. Thus, the specter of disaster looms before the entire Polish coast. In the Bay of Pomerania it has already been found that levels of seawater oxygen saturation are substantially reduced, especially in waters near the sea bottom and again in inshore waters around Swinoujscie, Miedzyzdroje, and Dziwnow. "Our" Baltic is being poisoned by 22 cities situated directly along the coast. To this we must add all of the cities in the interior of the country that do not have sewage treatment plants and are discharging their wastes into rivers and thence into the sea. The Vistula River alone pumps four million cubic meters a day into the Baltic. The "tourist industry," which annually provides services for two and a half million tourists, is not without blame either. Nor do real industries lag far behind. The sea is being polluted by shipyards, ports, the Gdansk Refinery, and Gdansk Phosphorous Fertilizer Plants, ships getting rid of their ballast water, human wastes, and the residues of cargoes that are discharged during the washing of ships' holds. Even agriculture produces some toxic wastes, since residues of artificial fertilizers and pesticides are also washed into the sea.

The wastes that flow into the sea, wastes which are rich in organic substances, add nutrients to the water. These substances provide food for the massive growth of marine microorganisms. The period of the so-called blue blooms and diatoms lasts from late spring into the early autumn. The plankton overgrowth begins to wither away. Oxygen is used up at a rapid rate, and the anaerobic decay of organic materials continues apace. Anaerobic bacteria produce hydrogen sulfide that accumulates in bottom sediments and in the layers of water above the bottom. Areas polluted with hydrogen sulfide exert an increasingly stronger influence that results in the reduction

in the populations of the former inhabitants of these waters. Fish feeding grounds shrink, and the same thing happens to beds of kelp, seaweed, and red algae, of which before long nothing will remain except pictures in biology textbooks. As a result of all this there is a proliferation of certain kinds of algae which can manage quite fine in a poisoned environment. These are the algae which, thrown up by the waves, pollute beaches, and sea-breezes are accompanied by a kind of hydrogen-sulfide, indeed hellish stench. If the problem merely boiled down to the fact that the seacoast will cease to be a magnet that attracts tourists, then this might be a pill we could swallow in silence. After all, there are still plenty of places around our country that have not been discovered by vacationers. The coastal region itself would suffer some losses by not being able to make any money off these vacationers. However, this problem has a much more serious dimension.

First, millions of people live close to this big body of water who are condemned to breath in these "winds" from the sea and live off the sea. We should remember them first and foremost. Secondly, the fact of the matter is that we catch around 200,000 tons of fish every year out of the Baltic, and the further pollution of the Baltic may in the future turn the Baltic fishing industry into a dubious proposition. And if anything at all is hauled up in the nets by that time, then every time you toss a fish into the frying pan you are bound to wonder whether the thing is even edible. At the present time concentrations of mercury in the bottom sediments of Poland's offshore Baltic areas is on the average two times greater, and lead concentrations are one and a half times greater than in other areas which are, according to the conventional wisdom, considered to be "clean" (are there really any such places?). Concentrations of DDT and PCB in the meat of fish caught in the Baltic are now twice as high as in that of fish caught in the North Sea. These data give us pause to be anxious about the future.

The adverse hydrological conditions that prevail in the bays of Gdansk and Pomerania and in the Vistula and Szczecin estuaries mean that they are falling victim to pollution at the fastest rate. The Bay of Gdansk has the misfortune of being situated at the mouth of our most important river, a river which also takes first prize when it comes to the volume of sewage that it spills into the Baltic. Thus, the Bay of Gdansk is the main reservoir for the pollutants collected from throughout the Vistula basin, hence from an area of land that amounts to more than half of Poland. More than one and a half million people live along the Vistula River. Seventy percent of the country's shipbuilding industry is located along this river. The Bay of Gdansk is therefore the direct and indirect repository for the municipal and industrial effluents generated by fifty major sources of pollution. Most of the sewage produced by the Tri-Cities area goes straight into the water.

It is true that the Tri-Cities area is equipped with three sewage treatment plants, but none of them work like they are supposed to. Consequently, their contribution to controlling this problem is negligible. The biggest plant, "Gdansk East," only treats sewage by means of a mechanical process, although according to the design plans it is supposed to be equipped with a three-stage installation. The other plant, "Gdansk Snowdrift," a combined mechanical-biological facility, is heavily overworked. The third plant,

"Gdynia-Debogorze," is only able to treat sewage from Gdynia, Rumia, Reda, and Wejherow and send it directly into the Bay of Gdansk as far as the Rewski Headland, which in effect means that this sewage is "spilled" right into the shallow Puck Bay. Puck itself does not have a sewage treatment plant, nor do any of the other communities lying along the Hel Peninsula.

The bay is being polluted not only directly, but also by atmospheric pollution. The transloading of sulphur, apatites, and many other bulk cargoes in the ports causes these substances to be dispersed into the atmosphere. From the east the air and water are being contaminated by the calcium phosphates dump and by post-production wastes from the Gdansk Phosphorus Fertilizers Plant. There is no point in waiting around for a sensible solution to this problem, which has all the earmarks of a major scandal. The major reason for this is that no one knows how to manage the almost 20-meter square waste products dump where 8 million tons of these calcium phosphates are being deposited on the site of the former brickyard works in Wislinka--8 kilometers from downtown Gdansk and 1 kilometer from Sobieszewski Island. This storage site is located in the area of the fertile Zulawy lands not far from the Dead Vistula. Ecologists have been lagging behind the splendid progress of industry for years. At the moment these lands are being worked by neighboring farmers, but if this dump continues to grow at its present rate, it will not be long before the entire western Zulawy area turns into a no-man's land.

To put the problem into precise professional terms, the situation in the Bay of Gdansk boils down to the disruption of the oxygen system, eutrophication, and the accumulation of toxic substances. Oxygen system disruption--that has a scientific ring to it. To put this into the vernacular, one could say without too much exaggeration that oxygen works like a kind of medicine in the waters of this bay. To put it bluntly, the bay is rotting. Eutrophication results from the fact that the waters of this bay are being enriched by an excessive amount of organic compounds. It was established as far back as the 1960's that this process had gotten under way in this area. At the beginning of the 1970's levels of super-oxygenation in layers of water near the bottom began to decline. As early as 1970 there was no more bottom animal life in the deep part of the Bay of Gdansk due to the lack of oxygen that was used up as a part of decomposition processes. It was at that time that hydrogen sulphide contamination began to appear over a large area.

The swimming beach at Puck was the first victim of this process. Then came the turn of the beaches in the Tri-Cities area. Big controversies were stirred up over the verdicts handed down by SNP [expansion unknown], and pure fabrications were concocted to make people believe that there were places to go which were cleaner and safer. But nothing came of all this. The yellow signs were put up in Sobieszew, Orlow, Brzezno, and Stogi. The disaster wound up being recognized as a matter of public law. As for the skeptics, the turning point probably occurred somewhere around 12 May of last year when the shores of the Bay of Puck and then the beaches in the Tri-Cities area itself were covered with dying eels with ulcerated bodies. The last public beach in Sopot was finally closed.

To put it as crudely as possible, the waters in this area are reminiscent of the contents of an alchemist's crucible. At the end of the 1970's concentrations of phosphates in these waters were two or three times higher than they were a decade earlier. For example, during 1974-1976 in the inshore areas of the bay average concentrations of phosphates were 50 percent greater, nitrates--64 percent greater, and ammonia--108 percent greater than in the other areas of the Gdansk Basin. The reason--the year-by-year increases in the volume of solid wastes discharged into the bay by the Vistula.

Concentrations of mercury in the bottom sediments of the Bay of Gdansk exceed those in open sea areas by a factor of 12, and the copper, lead, and zinc content of these bottom sediments is greater by a factor of from 1.5 to 2.5.

The bacteriological contamination of inshore waters is increasing at an alarming rate. Viruses thrive in these waters. I will not bother to cite all of the complicated Latin names of these unpleasant microorganisms. I will only go so far as to say that they can cause diseases of the digestive tract, polio, influenza, viral inflammations of the intestines, and even veneréal disease.

The eutrophication of the Baltic is mainly attributable to the pollutants that are being discharged into its waters by rivers, primarily the Vistula and the Oder. The major urban-industrial centers situated along the seacoast itself are contributing their share of toxins as well. As everyone knows, programs dedicated to the construction of sewage treatment plants, those in the interior and those along the seacoast, have always lagged behind the programs of pious wishes and unfulfilled dreams. And, as the saying goes, this is what killed Chicken Little.

The construction of sewage treatment plants in coastal areas is by itself not going to do much to solve this problem. On the other hand, it would seem as though this line of thinking has something to do with the slow progress that has been made toward the construction and modernization of such facilities along the Bay of Gdansk and is helping to cause people to turn a deaf ear to alarmist reports. One example might be the three-stage sewage treatment plant in Swarzew, a plant which is supposed to serve Puck and the entire Hel Peninsula and which would make it possible to bring about a substantial, albeit local improvement in the situation.

Ecologists are making a strong effort to see to it that the issue of protecting the Baltic is addressed by the highest form of legislative initiative. They propose that a law should be passed on this issue. Permit me to ask the following question: What will such a law do to change things? We already have a whole set of laws, running the gamut from the Water Law of 1974, the Law on Environmental Protection and Management of 1980, to the highly specific executive orders issued by the Council of Ministers in the same year. Has the air become any fresher, has the water become any cleaner since the passage of these regulatory acts? So, let's not pass any more laws than we absolutely have to.

What we need more than a law is a concrete program, one that can be implemented in a short period of time, for the construction and modernization of sewage treatment plants along the Bay of Gdansk so as to restore some minimal semblance of normal health safety standards in this region as quickly as possible. This program would more than just be a declaration of principles, rather it would be backed up by appropriations of the funds which are needed to carry it out so that it would not forever after remain just another paper program. The program should also not overlook the need to improve things in the country's interior.

To the best of my knowledge, the authorities in the Gdansk region are making an effort to get things moving in this direction. Unfortunately, however, this is not just a matter of the willingness to take action or even of money, since the money to pay for this is available. What we seem to be lacking are the contractors who would be willing to do a quick and efficient job of building these facilities. It is absolutely essential that we go out and find these contractors. On the other hand, though, this appears to be an odd predicament, since we hear so much of late about the alleged lack of work which is threatening one industrial construction firm or another.

And, finally, let's not kid ourselves. Even if we act right now to greatly increase spending on the construction of sewage treatment plants and, to this end, manage to find contractors who are able to "handle" the money appropriated for this purpose, it will take at least several years before we can look forward to any results. Nature needs time to get back on its feet. This is why we need to be all the more energetic in finally getting down to work on this problem.

I would not want to be accused of spreading hysteria or, just before the start of the season, spoiling people's well-deserved vacations and depriving Gdansk residents of their summer season revenues. The situation really is catastrophic, and it will continue to be so even if we do succeed in reopening the Sopot beaches this year.

Environmental Protection Legislation

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 8, 17 May 82 pp 37-38

[Article by Janusz Walewski: "To Keep a City Alive"]

[Text] On 2 December 1981 the Peoples Council of the City of Krakow passed a resolution on the protection of the environment in the metropolitan voivodship of Krakow.

The introduction of this resolution reads in part as follows: "The Peoples Council of the City of Krakow has determined that the degradation and devastation of the resources and assets of its natural environment have been growing steadily worse over a period of many years. It has found in particular that the level of air pollution

"has reached a critical point, especially in the city of Krakow, that there is a growing shortage of water for residential and agricultural users, that lands under cultivation are being steadily degraded, that plant and animal life is in danger, that the landscape is being scarred, and, above all, that there is a direct threat to human life and the historical monuments of the Old Town."

The principal cause of this situation is the growing disequilibrium in the voivodship's social and economic development. This development process is dominated by the presence of raw materials processing industries equipped with obsolete production technologies coupled with simultaneous enormous oversights when it comes to the protection of the environment and limited capabilities when it comes to the expansion of water, heat, and gas supply systems, the restructuring of the transportation system, and also the expansion of green areas in the city of Krakow.

It is widely believed in Krakow that over the past dozen or so years more damage has been done to the city as a result of the pollution and degradation of the natural environment than has occurred over the entire one thousand year span of its history. Even if this claim may appear to be greatly overstated, the study backed up by a thoroughgoing scientific analysis prepared by the Krakow Environmental Protection Council in November 1981 and entitled "An Assessment of the Current State of and Proposals for Future Programs for Efforts Dedicated to the Protection of the Natural Environment in Krakow Voivodship" contains facts which give cause for alarm. This, then, is the way things really are in Krakow. Here are a few examples.

As a result of the enormous concentration of industrial activity here this small area which accounts for not quite 1 percent of the country's total land area is inhabited by 3 percent of Poland's total population, turns out more than 4 percent of its aggregate industrial output, and at the same time releases into the atmosphere 16.4 percent of the country's total volume of gaseous pollutants, more than 6 percent of its total volume of particulate pollutants, discharges around 15 percent of its total volume of untreated sewage into surface waters, uses up 7 percent of the country's total volume of water resources, and deposits more than 6 percent of its total volume of industrial waste products in dumps.

Krakow Voivodship undoubtedly takes first place in terms of the volume of pollutants emitted into the atmosphere per unit of land area--548 tons of particulates and gases per square kilometer compared to 476 tons in the Upper Silesian Industrial Region; the waters of the Vistula within this voivodship's jurisdiction do not meet any minimal water quality standards; current conditions with respect to the equipment, management and siting of storage areas and dumping grounds on the whole fall short of meeting the full range of environmental protection requirements and are bringing about the degradation of the environment as a result of water, soil, and air pollution, changes in hydrological conditions, and the devastation of adjacent areas. These and other factors, such as noise pollution and the contamination of the soil in the Skawina area, pose a serious threat to the health of local

residents. It is quite true, of course, that the same things are happening in other areas of the country suffering from heavy environmental pollution, a situation which attests to the environmentally-related causes of a number of civilization diseases, but in the case of Krakow this problem is assuming dimensions that are extremely alarming and is characterized by a number of unique features.

One can identify four distinct classes of diseases which are related to the adverse impact of the environment on human health, i.e., respiratory system disorders, circulatory system disorders, cancers, and central nervous system disorders.

The rate of illness-related absences from work in Krakow attributable to respiratory diseases exceeds the national average by around 30 percent. One should also point out that this city suffers from smog and smog-like problems which give rise to the increased need for emergency medical care and increased mortality rates.

Among the many environmental factors which have an impact on the spread of circulatory system diseases one should mention the fact that in this area an enormous amount of carbon monoxide is emitted into the atmosphere by industrial plants. The oxygen content of the air around Krakow reads at only about 18 percent instead of 21 percent. The incidence rate of malignant cancers during 1976-1977 is alarmingly higher than the world average and in terms of the number of persons contracting this disease per 100,000 of population the figures are 258.0 for men and 201.1 for women (in Krakow) compared to 41.7 for men and 7.7 for women (worldwide).

Approximately 30 percent of the chemical substances emitted by local industries have an adverse effect on the central nervous system. Infants and children are especially vulnerable to these compounds (e.g., carbon monoxide, nitric oxide, fluorine compounds). The human physiology is also threatened during childbearing years.

Under these circumstances, then, it is no wonder that a movement has gotten under way in Krakow dedicated to protecting nature and the living environment. The first observations on the problem of air quality were made public in 1964. The Peoples Council of the City of Krakow addressed this issue on four occasions in 1971, 1977, 1981, and also at its very last session held on 7 April 1982 devoted to, inter alia, the problems of urban renewal and the protection of the city's cultural monuments. This proves that people are aware of the threat to the environment. But over a period of many years this awareness has not been enough to put up a resistance against the triumphant technocrats. This city, which is known historically for its achievements in the arts and sciences, has let itself fall under the total domination of industry.

It has now become necessary to adopt a new strategy for the economic and urban development of the city and voivodship of Krakow that is based on ecological criteria. The problem was stated succinctly at the council session held in December 1981, i.e., the city must not die. This is why both industry and

the city's residents must make adjustments to accommodate the needs of Krakow. If they are unable or unwilling to do this, then they will have to move out of Krakow. Krakow ought to continue to grow in a way that will preserve its most characteristic landmarks down through the centuries to come, e.g., Wawel, the Church of Our Lady, and a clean Vistula River. It is not yet too late, it is claimed. However, modern science and technology need to be harnessed in order to halt this process of growing environmental degradation. What technology has destroyed it must now reclaim.

The resolution referred to in the beginning of this article stipulates that by the end of this year a review should be made of the provisions contained in the socioeconomic development plan and land-use management plan of the Krakow metropolitan voivodship and the Krakow Metropolitan Planning Board and in other local plans that would take into account, among other things, the restructuring and modernization of local industries, mainly including raw materials industries, in favor of the opening of non-polluting manufacturing concerns equipped with up-to-date production technologies and making allowances for the phased shutdown of the raw materials production divisions of the Krakow Sodium Products Plant and the Krakow plant of the "Bonarka" Inorganic Chemicals Industry by 1985.

According to information received from the director of the Environmental Protection and Water Resources Management Department, Dr Bronislaw Kaminski, representatives of the Peoples Council are now holding talks with representatives of the Planning Commission of the Council of Ministers and the Ministry of Chemical and Light Industries for the purpose of drawing up a detailed flowchart schedule for the shutdown of the aforementioned product divisions of these plants.

Section 3 of the resolution stipulates that efforts should be made to curb air pollution, among other ways, through the intensive expansion and modernization of dust-extracting equipment installed at industrial and public-utility sources of particulate-matter emissions. In this connection the Office of the City of Krakow has entered into agreements, for example the agreement with the Nowa Huta Cement Plant aimed at providing funding or rather loans worth up to 20 million zlotys for the construction of dust-scrubber installations for rotary kilns over the period 1982-1984. This will result in a reduction in the volume of particulate emissions from 320 tons to 90 tons per annum. In return a pledge was obtained from the cement plant to furnish the Environmental Protection and Water Resources Management Department with 22,000 tons of cement. The cement will be used for purposes related to the protection of water stored in drinking water reservoirs. This volume of cement will meet all of the voivodship's most urgent needs in this regard. At the same time, in connection with this resolution, the Voivodship Office has provided the Krakow Sodium Products Plant with 10 million zlotys to pay for the modernization of dust-scrubber equipment installed in its boiler plant.

Section 4, item 1 of the resolution reads as follows: "With a view to the efficient management and protection of water resources the following measures are deemed to be most urgently necessary:

"1) the drafting of a voivodship long-range water resources management plan by 31 December 1983 wherein, in view of the growing water shortage, provisions should be made for assigning first priority to meeting the needs of public utilities and agriculture;

"2) the intensification of work dedicated to finding a systems-type solution to the problems of water resources-sewage treatment management...and the suspension of work on the construction and expansion of plants which pose a threat to water resources."

The water resources management plan is in the drafting stages. However, in view of the present difficult situation a program of emergency measures is now being put into effect that is aimed at alleviating the drinking water shortage. This program involves, among other things, the modernization of waterworks facilities, the construction of new backup subsurface water intake conduits (three such projects were built in April), and also efforts aimed at the conservation of public water by industry. During the period from January through May of this year seven industrial plants were inspected for the purpose of finding out what they are doing to conserve water. The findings of this survey revealed that it is feasible to cut back public water consumption rates by approximately 10,000 cubic meters per day, and the city's current daily water deficit amounts to 40,000 cubic meters. It has been recommended that similar studies should be conducted in another 100 plants by mid-1983.

In March and April a detailed survey was made of the voivodship's drinking water reservoirs in order to determine the sources of the pollutants contaminating this water supply. As a result of this survey it was found, for example, that there are around 100 unauthorized garbage dumps and 1,500 unauthorized farm septic tanks and cattle farm manure piles.

Item 2 of section 4 reads as follows: "The Peoples Council of the City of Krakow is making formal proposals to the voivodship peoples councils of Katowice, Bielsko, Tarnow, Nowy Sacz, and Kielce calling for joint efforts to set up a coordinated program of water resources management and protection for the upper Vistula basin."

The chairman of the Krakow City Peoples Council submitted this proposal to the aforementioned voivodship peoples councils in January. Positive replies were received from Katowice, Tarnow, and Bielsko by the end of April. Talks are slated to begin during the third quarter of this year.

Section 8 stipulates, inter alia, that a system should be devised for the continuous monitoring of air, water, soil, and plant contamination and the state of public health in the voivodship.

The first step in this direction has already been taken. Thirty-one monitoring stations are in operation in the voivodship that test for levels of contamination in the soil and in plants. The progress made this year will lay the groundwork for expanding the network of test stations and its area of coverage in the years to come.

There are items in the resolution on the protection of the environment of the Krakow metropolitan voivodship that so far have not "gotten off the ground." However, considering the changes in the sociopolitical situation that have taken place since the resolution was passed, problems of the highest priority associated with the declaration of martial law, it should be noted with approval that the environmental protection issue has not been pushed off onto the sidelines. The little bit of progress that has been made over a span of barely 5 months amounts, relatively speaking, to a lot.

"The pre-eminent importance of the goal of removing barriers to the city's growth," says director B. Kaminski, "is so obvious that our efforts are naturally going to receive a high priority. The only stumbling block is the lack of funds for capital construction, e.g., for the construction of municipal and other types of sewage treatment plants. We often have to get by by drawing on the environmental protection and water resources management fund."

In the opinion of the authors of the "Assessment of the State of and Program Proposals for Environmental Protection" the first phase of the long-range programs, i.e., through 1990, must unfold in a way which will make it possible to bring about a noticeable improvement in the situation that would encompass:

- bringing the level of air quality into line with current standardized requirements,
- ending the water shortage by first of all meeting the needs of public utility services and agriculture,
- improving the state of public health by reducing the number of diseases which are contracted as a result of exposure to environmental hazards,
- putting a stop to processes leading to the destruction and ravaging of Krakow's historical monuments,
- the formation and development of buffer zones and also actions designed to further the full-scale rehabilitation of soils and ecosystems in the vicinity of major pollution sources, including in particular the Aluminum Works in Skawina, the Lenin Metallurgical Combine, the Nowa Huta Cement Plant, the Leg Electric Power and Heat Generating Plant, the Skawina Power Station, and so on,
- the expansion of the system of city parks and recreation areas, especially in and around Krakow.

The things that have been accomplished during the first few months that this resolution has been in force make it possible to look forward with optimism to the fulfillment of the program that has been mapped out. This is a program which simply must be carried out in order to keep the city alive.

Heavy Industrial Pollution

Warsaw SLOWO POWSZECHNE in Polish 29 Apr 82 p 3

[Article by Marek Antoni Wasilewski: "Thinking Things Over in the Jaws of a Shark"]

[Text] If somebody dies of cancer or lead poisoning at the age of 48 or 54 no one would have the nerve to write "environmental pollution" under the death certificate's "cause of death" heading. Authors of books, medical statisticians, demographers, and epidemiologists would be in favor of this, but no one would be so bold as to record that John Doe was done in by the "Prosperity" Metallurgical Plant No 5 or by the Combined Forces of the Water, Air, and Soil Pollution Industry....

This is something that both those who govern and those who are governed ought to be thinking about. By those who are governed I mean first of all the residents of the Upper Silesian Industrial Region [GOP], Krakow, the Miedziowy Basin, the Koninski Basin, and, finally, areas where our power stations are located.

We should first of all take a look at the GOP where, as is revealed by data collected for official government use, 2.5 million people are living under conditions which are harmful to human health, and of this number 1 million are living under hazardous conditions where they are directly exposed to carcinogenic substances. In the GOP the incidence of neoplastic diseases exceeds the national average by 34 percent, the incidence of respiratory diseases--by 47 percent, and the accident and traumatic injury rate--by 20 percent. A mere 19 percent of the total volume of industrial wastes and 11 percent of municipal sewage receives proper treatment and over 63 percent of all local running water is not even fit for industrial use since it would have a damaging effect on machinery and instruments. Sixty percent of the nation's total industrial wastes are concentrated here, as are 35 percent of the country's total gaseous emissions and 30 percent of all of its particulate emissions.

Thus, the GOP is already caught in the jaws of the pollution shark, and it could in fact be said that the residents of this region are only wondering now when this shark or dragon is going to snap its jaws shut. But it is hard to say when this will happen. The authorities acknowledge that this area has been hit by an ecological natural disaster. In light of this alarm it is hard to explain to residents of Silesia where the money is going to come from for the construction of a subway in Warsaw when no money is available to pay for the construction of garbage incinerators and composting plants in the GOP.

Several generations of people have spent their lives managing the economy of the GOP in a wasteful and exploitative manner when it comes to paying nature her due in the belief that it is perhaps possible to tape nature's resources "free of charge." Now a generation has come of age that will have to pay for the mistakes and misguided notions of its predecessors, and this is a

generation which finds itself in the midst of a major economic and political crisis. This is not an easy bill to pay when you are surrounded by creditors with outstretched palms. But we are going to have to pay this bill anyway. Even the authorities have accepted the idea that the GOP, like the Baltic, is a top-priority problem. For the time being this idea is just a matter of principle, a strategic plan in the realm of environmental science. There are three observations I would like to make about this.

First, from an environmental science standpoint there are no boundaries separating Krakow Voivodship and the GOP. This means that Krakow Voivodship cannot be excluded from this plan. It can only be treated in a comprehensive fashion, and it's only a question of figuring out how to apportion the costs of all this, the respective ratios of which should be tailored to take into account the coefficient representing the ratio of population figures to the degree of risk.

Second, as far as water resources protection is concerned, a cleanup program cannot be launched in Krakow Voivodship to start off with, rather things have to be straightened out first in Bielsko and Nowy Sacz voivodships, since we are just repeating the mistakes of the past when we built model sewage treatment plants, for example, right in the middle of the Warta River, plants which did almost nothing to save this river as far as its water quality rating is concerned.

Third, this is a question of solving the problem of mine water desalination and waste rock backfilling.

The councillors attending the session of the Voivodship Peoples Council held on 26 October 1981 were aware of this situation. They pointed out that in Trzebina, Lozisko, Zawiercie, and Zabrze-Biskupice the volume of dust fallout amounts to 1,700 tons per square kilometer per annum, whereas the maximum allowable level is 250 tons. They also pointed out that lead concentrations in Szopienice, Tarnowski, Gory, and Bukowno (recreation areas!) exceed tolerance levels by 100 times (and children go to Bukowno in droves!). Zabrze and Ruda Slaska are exposed to the fumes of the carcinogens benze-a-pyrene and perilene emitted by coking plant smokestacks.

There is a great deal of work that urgently needs to be done by way of civic, military, and pledge-drive public works projects in the GOP area. These efforts can and should be made, and the best way to go about this would be on the basis of one-month, rotational work projects dedicated to rescuing Silesia and Krakow. Appropriate plans and schedules should be worked out quickly, and an effort should be made to repudiate the myth that this is an impossible feat. If we continue to address this problem in the same way we have up until now, holding conferences and seminars, shuffling statistics, and generally moaning and groaning over the situation, then this will be tantamount not just to leaving things at a standstill, but rather to beating a retreat.

We should point out that only 50 percent of the soil in Katowice Voivodship is suitable for growing foodstuffs fit for human or animal consumption. Half

of the land there has been ruined to such an extent that it will take a decade or several decades to reclaim it. Understanding what these problems are all about has done nothing to help improve the situation. We have seen how this situation has continued to deteriorate as a result of the pressures on industry to produce more and as a result of the disregard for the laws on environmental protection.

Things have gotten so bad, that residents of the voivodship no longer believe in any of the alarm bells that are being sounded one after the other. This is because they have been rung dozens of times for the sake of appearances, to make things look dramatic, to stage a phony pantomime that mimics a real ecological reform movement, a pantomime which wound up being a phony preview and avoided the necessity of having to worry about what to do about the main engagement--for stubborn, hardheaded, commercial, and industrial reasons.

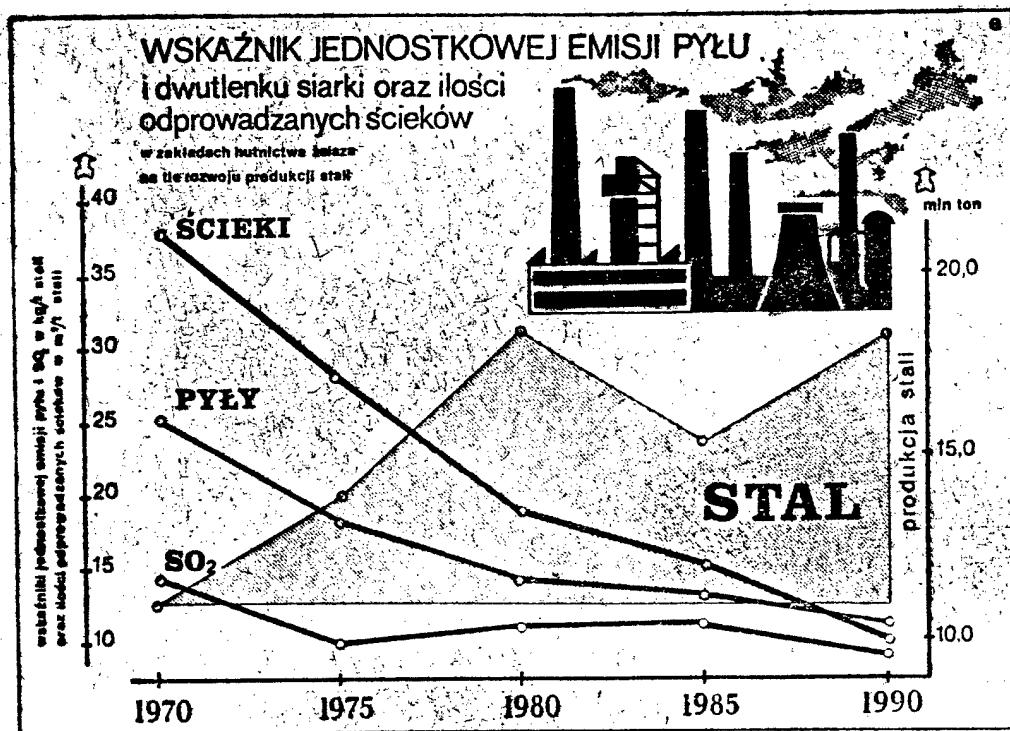
As the saying goes nowadays, let's start over! Martial law has what it takes to get people moving so that they will finally believe their ears and get down to work. All of them.

Industrial Environmental Protection Measures

Warsaw PZECZPOSPOLITA in Polish 24 May 82 p 4

[Article by "z": "Metallurgical Plants are Protecting the Environment"]

[Text]



Key:

- A. Unit emissions rate of particulates, sulfur dioxide, and effluent volumes in ferrous metallurgy plants in relation to growth of steel output
- B. Unit emissions rates of particulates and sulfur dioxide in kilograms per ton of steel output and of effluent volumes in cubic meters per ton of steel output
- C. Millions of tons
- D. Steel output
- E. Effluents
- F. Particulates
- G. Steel

The program for the modernization and growth of ferrous metallurgy through 1990 calls for the major upgrading of environmental protection measures. It provides for measures geared toward reducing air and surface water pollution and expanding waste product recycling efforts and wasteland reclamation efforts.

This will be accomplished by closing down metallurgical product divisions and installations which are obsolete and at the same time harmful to the environment. And so, by taking this approach, it will be possible by as early as 1985 in Katowice Voivodship to reduce particulate emissions by 11 percent, sulfur dioxide emissions by 15 and to cut the volume of effluents discharged by the metallurgical works by 6 percent.

Through the modernization of its old environmental protection facilities and the construction of new ones the Lenin Metallurgical Combine will also, working in the same time frame, spare people and nature from the effects of 14,000 tons of particulates, 10,000 tons of sulfur dioxide, and 174,000 cubic meters of industrial effluents every year. At the same time, the national economy stands to gain something from this, since the plant will be recycling 800,000 tons of industrial wastes every year.

The "Katowice" Metallurgical Works has a similar program which provides for a reduction in particulate emissions of almost 18,000 tons annually and a decline in effluents of 25,000 cubic meters per day.

Apart from the above projects geared toward overcoming existing lags and delays in the area of environmental protection, the metallurgical industries growth program calls for equipping newly-built metallurgical plants with high-performance installations which will minimize environmental damage and stresses.

11813
CSO: 5000/3017

CHILE

AIR POLLUTION EXPERTS CITE SANTIAGO SMOG

Santiago EL MERCURIO in Spanish 12 Jul 82 p A1

[Text] In the opinion of experts, Santiago is not as large and does not have as many vehicles or inhabitants as other major urban areas in the world, but its atmosphere is sometimes equally or more polluted.

This level of pollution is mainly caused by the geographic characteristics of our capital, sometimes described as a "clogged chimney."

A research study by the Catholic University released by the Mayor's Office, which heads up the Metropolitan Environmental Clean Air Committee, states that Santiago releases fewer pollutants than other urban centers, but that its rates of pollution exceed those of other cities. The problem is worse in the winter, when the internationally recommended permissible limits are sometimes exceeded.

Lid

The study states that the sun does not directly heat the atmosphere when its light passes through it, but rather, that the heat must reach the surface of the earth from which it is then reflected. "That is why the higher we go, the cooler it is," the study states.

This characteristic of the temperature in the atmosphere is relevant to the problem of cleaning up the atmosphere because it enables surface particles to rise and be dispersed. However, because Santiago, like Los Angeles, is in a zone of high subtropical pressure, at the meeting point of both currents: ascending and descending, the air is heated by the effect of friction.

This is what is scientifically known as "dynamic thermic inversion," which constantly occurs between 300 and 450 meters above the surface of the earth and acts as a lid barring the way to natural ventilation of the city.

The study adds that it is commonly thought that the mountains around Santiago are an obstacle to its ventilation, but they are actually its only means of natural aeration. This is due to the fact that solar radiation increases the higher one goes and by a thermic effect, the differences produces local high and low pressure centers between which masses of air circulate for brief periods at great intensities.

Pollution Index for Downtown Santiago During the Last Two Weeks

DIA:	June												July				
	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12
1)	2)	5	9	16	25	34	24	15	7	12	13	15	21	22	23	24	25
Monóxido de carbono (CO, partes por millón)	10	5	9	16	25	34	24	15	7	12	13	15	21	22	23	24	25
Acidez (anhídrido sulfuroso, microgramos por metro cúbico) ... 3) ...	41	41	41	107	237	113	58	45	45	45	15	106	67	68	69	70	71
Suciedad (partículas, microgramos por metro cúbico) ... 4) ...	43	43	43	161	482	250	99	47	47	47	136	272	69	70	71	72	73

Fuente: Secretaría Ministerial Metropolitana de Salud.

Source: Office of Metropolitan Ministerial Secretary of Health

Key:

1. Day
2. Carbon monoxide (CO, parts per million)
3. Acidity (sulfuric anhydride, micrograms per cubic meter)
4. Pollution (particles, micrograms per cubic meter)

These winds ventilate the city and part of its atmosphere. At night, from 2300 hours until 0800 hours, they blow from the mountain range to the city. At noon, there is no predominant direction and at 1400 hours, there is a definite change in direction, when the winds begin to blow toward the mountain range.

This circulation of winds explains why, already early in the morning, downtown Santiago already has a polluted atmosphere, despite the fact that there are not yet any automobiles, while the eastern areas have high levels of pollution early in the afternoon, times when there is not much traffic.

Detection

Through the Metropolitan Environmental Health Service, the Ministry of Health has a network of stations in the city for the purpose of detecting atmospheric contamination. It thus has a daily view of the situation in the capital, especially the downtown area, the point having the greatest concentration.

This daily information basically includes carbon monoxide (CO), measured in parts per million, the rate of acidity (sulfuric anhydride, micrograms per cubic meter), and the dirtiness of the air (particles), measured in micrograms per cubic meter.

The information is processed from Monday to Friday and will begin to be published starting tomorrow by EL MERCURIO, in a table put out from Tuesday to Saturday showing the figures for the preceding day. It is because of the need for the scientific processing of these parameters that data for Saturdays and Sundays will be published with information for Mondays.

11,464

CSO: 5000/2142

MINSAP WARNS ABOUT OPEN-AIR GARBAGE DUMPS

Havana JUVENTUD REBELDE in Spanish 12 Jul 82 p 2

[Text] The MINSAP [Ministry of Health] National Sanitation Campaign is already under way and it is appropriate to offer some information on solid wastes or garbage.

First of all, it constitutes a great source of disease, not only because it serves as a lurking place for millions of bacteria which can cause numerous illnesses in the human body, but also because it becomes an ideal refuge for the proliferation of insects and rodents.

Hence, the importance of the present campaign of cleanliness and hygiene and the inherent work of eliminating garbage dumps, especially in more heavily populated urban areas and the areas around schools, plazas and playgrounds.

Strictly speaking, the elimination of the solid wastes consists of three basic parts: putting it in containers, collection and transport and final disposition.

It should be put in metal receptacles as airtight as possible to avoid bad and disagreeable odors and above all the breeding and rapid development of insects and rodents.

The collection and the transportation of garbage to its final destination should be done with the proper equipment, taking care not to scatter it in streets and avenues, because there then occurs what is popularly referred to as "undressing one saint to clothe another."

Various formulas for final disposition have been utilized: open-air garbage dumps or burning, dumping into rivers, lagoons, etc.

Open-air garbage dumps are very unattractive, they seriously contaminate the environment, they make it unbreathable and polluted and finally they are dangerous to human health.

Incineration consists in burning the solid wastes. It is a good method. The dumping of refuse into rivers and lagoons is a really dangerous practice,

since it contaminates the water and converts it into vehicles for transmitting many diseases.

Underground burial is the method preferred by the public health authorities which they recommend for its effectiveness, hygiene rating, and for being easy and economical.

It consists in digging trenches where the garbage is thrown, then covering it with the same dirt excavated.

The present sanitation and hygiene campaign organized by MINSAP, with the support of all the people grouped in their unions and social organizations have a supreme objective: Take care of collective health!

9678
CSO: 5000/2144

PRESIDENT ISSUES STIFF NEW LAW AGAINST WATER POLLUTION

Cairo AL-JARIDAH AL-RASMIYAH in Arabic No 25, 26 Jun 82 pp 36-40

Law: "Law No 48 for 1982 Protecting the Nile River and Watercourses against Pollution"

Text In the name of the people:

The president:

The People's Assembly has decreed the following law and we have issued it:

Article One. In application of the provisions of this law, watercourses will be considered:

A. Surface of fresh water bodies including:

1. The Nile River, its two branches and its bays.
2. Canals and channels of all categories and side channels.

B. Surface bodies of water that is not fresh, including:

1. Drainage channels of all classifications.
2. Lakes.
3. Ponds, closed surface bodies of water and flowing bodies of water.

C. Groundwater reservoirs.

Article Two. It is forbidden to dispose of or eject solid, liquid or gaseous wastes from real property on tourist, industrial or commercial shops and installations, wastes from sanitary drainage activities and so forth into the entire length and surface of watercourses until a permit has been received from the Ministry of Irrigation in cases and in accordance with rules and standards which are issued by decree of the minister of irrigation in accordance with a recommendation by the minister of health. Permits issued in this regard will contain a definition of the standards and specifications governing each individual case.

Article Three. Ministry of Health agencies will conduct a periodic analysis in their laboratories of samples of liquid wastes treated by the installations that have been given permits to make discharges into watercourses on dates which they will determine, in addition to analyses requested by the Ministry of Irrigation outside of the periodic times.

The Ministry of Health agencies will be responsible for taking and analyzing samples at the expense of the person holding the permit, who must deposit with the ministry a sum of money which will be set on the basis of the type of waste as credit against the costs of taking, transporting and analyzing the samples.

The Ministry of Irrigation and the person concerned will be informed of the results of the analysis. If it appears that the liquid wastes discharged into the watercourses are in violation of the standards and specifications stipulated in the permit granted, but do not constitute an immediate danger, the person concerned must, within a period of 3 months of the date he is informed of that, take measures to treat the wastes so that they conform to the stipulated specifications and standards, and the treatment procedures must actually be adopted and tested during this period.

If treatment does not take place when the 3-month period ends or its insufficiency is proved, the Ministry of Irrigation will withdraw the permit granted to the person concerned and the discharges into the watercourses will be stopped by administrative means.

However, if it appears from the results of the sample analysis that the samples are in violation of the standards and specifications stipulated by the provisions of this law in a manner which constitutes an immediate danger to pollution in the watercourses, the person concerned will be informed that he must eliminate the causes of the damage at once or the Ministry of Irrigation will do so at his expense or will withdraw the permit granted to him and stop the discharges into the watercourses by administrative means.

Article Four. It is not permissible to grant permits for the construction of any installation which will produce wastes that will be discharged into watercourses.

However, the Ministry of Irrigation alone may, in case of necessity and in order to realize the public interest, give permission for the establishment of such installations if the body using them commits itself to provide units to treat these wastes in a manner meeting the specifications and standards stipulated in accordance with the provisions of this law, provided that the operation of the treatment units start immediately upon commencement of operation of the installations. The provisions of Article Three of this law will apply to these installations.

Existing installations will be given a grace period of a year from the date this law goes into effect to arrange means to treat their wastes; otherwise, the permits granted them will be withdrawn. In this case the Ministry of Irrigation may adopt the necessary measures to stop discharges into watercourses by administrative means without prejudice to the penalties contained in this law.

Article Five. Owners of houseboats, tourist vessels and other structures located in the channel of the Nile and its two branches will commit themselves to adopting means for treating their wastes or collecting them in specific locations, draining them off and ejecting them into drains or sanitary drainage collection areas, and they will not be permitted to discharge any of their wastes into the Nile or watercourses.

The irrigation engineers charged with applying the provisions of this law will take charge of periodic inspections of these floating vessels within their individual jurisdictions; if it appears that they are in violation of the provisions of this article, the owners of the floating vessels will be given a grace period of 3 months to adopt treatment methods and eliminate the causes of damage. If that is not done after the stipulated period ends, the floating vessels' permits will be cancelled.

Article Six. The Ministry of Irrigation will be concerned with issuing permits to establish new floating vessels and renewing permits on existing ones. It will also be concerned with granting permits to establish all installations from which wastes that are discharged into watercourses are produced.

Article Seven. Mobile river units used for transportation, tourist activity or the like will be prohibited from letting fuel used in their operations leak into watercourses.

The provisions of Article Five of this law will apply to such units.

Article Eight. Sanitary drainage facilities will take charge of setting forth one or more model units for treating viscous or liquid wastes from factories, dwellings, other installations, floating vessels and river units, in a manner which will cause them to conform to the specifications and standards set out in accordance with the provisions of this law.

Article Nine. Permit applicants will undertake to present the Ministry of Irrigation with material which will prove that they have provided waste treatment units and a certificate from the sanitary drainage facilities that they have examined the treatment units and that they are adequate.

Article 10. The Ministry of Agriculture, in selecting and using different types of chemicals to resist agricultural pests, must observe that their use will not result in the pollution of watercourses through discharges of these chemicals into watercourses, whether directly, through the performance of spraying operations, by mixture with water drained from agricultural lands, or by the washing of spraying machinery and equipment or pesticide containers in watercourses, in accordance with the standards which are agreed upon by the Ministries of Agriculture, Irrigation and Health.

Article 11. The Ministry of Irrigation, in selecting different types of chemicals to resist water plants, must observe that their use will not lead to engendering the pollution of watercourses and in all cases it must adopt the necessary precautions before, during and after carrying out the chemical treatment process in order to prevent the use of water from watercourses in which the

treatment is taking place until it is confirmed that the effects of these materials on the quality of the water and its safe use for all purposes have been eliminated.

Article 12. Drainage water may not be reused directly or by mixture with fresh water for any purpose until its fitness for this purpose has been proved. The Ministry of Irrigation may, after obtaining the opinion of the Ministry of Health, adopt measures to treat the drainage water which is to be reused.

Article 13. The Water Surface Police Department of the Ministry of the Interior will take charge of carrying out continuous inspection patrols throughout watercourses and helping the specialized agencies discipline violations, eliminate causes of pollution and give notice of all violations of the provisions of this law.

Article 14. A special fund will be established to which the receipts of levies, fines and costs arising from the application of the provisions of this law will be given and from which disbursements will be made in the following instances:

Costs of the administrative elimination of violations.

Aid to bodies which erect plants to treat wastes prior to drainage.

Performance of laboratory studies and research.

Provision of bonuses for guides and persons disciplining crimes which are in violation of the provisions of the law.

Article 15. The executive bill of this law will set the levies that will be payable in execution of the provisions of this law at a level that does not exceed the maximum limits contained in the schedule accompanying it. The bill will also set the sums that will be payable in execution of the provisions of this law and may be collected by administrative detention.

Article 16. Without prejudice to the provisions stipulated in the Penal Code, violations of the provisions of Articles Two, Three (final paragraph), Four, Five and Seven of this law and the decrees executing these will be punishable by imprisonment for a period not to exceed a year, a fine of no less than 500 pounds or more than 2,000 pounds, or either of these two penalties. In the event the violation is repeated, the penalty will be doubled and the person committing the violation will have to eliminate or correct the activities which are in violation by the date stipulated by the Ministry of Irrigation. If the person committing the violation has not performed the elimination or correction by the stipulated date, the Ministry of Irrigation may adopt measures to perform the elimination or correction by administrative measures at the expense of the person committing the violation, without prejudice to the ministry's right to cancel the permit.

Article 17. The minister of irrigation will issue the executive bill for this law after receiving the opinion of the other ministries concerned within 3 months of the date on which it is published.

Article 18. Articles 10, 11, 12, 16, and 19 of Law 92 for 1962 on the discharge of liquid wastes will be abrogated, as will all provisions which contradict the provisions of this law.

Article 19. The irrigation engineers who are specified by decree of the minister of justice will, with the agreement of the minister of irrigation, function as disciplinary officials in the case or crimes stipulated in this law which lie under their jurisdiction.

Article 20. This law will be published in AL-JARIDAH AL-RASMIYAH and will go into effect 3 months after the date on which it is published.

This law will be stamped with the seal of the state and will be executed as one of its laws.

Issued by the Office of the President on 21 June 1982.

Signed Husni Mubarak.

11887
CSO: 5000/5023

ENERGY MINISTER ENCOURAGES AFFORESTATION

Harare THE HERALD in English 6 Aug 82 p 4

[Article by David Maruziva]

[Text] The Minister of Industry and Energy Development, Dr Simbarashe Makoni wants a national programme for planting woodlots to meet rural energy requirements.

Addressing villagers at Shutu centre in the Chiweshe communal lands this week Cde Makoni who was officially opening a solar-powered water pump, warned that the rate of deforestation over the last 15 years had become too high.

"There are many more people now than 15 years ago and we are cutting down trees indiscreetly and indiscriminately."

National Tree Planting Day, Cde Makoni said, had become a day for slogans and festivities confined to December. But nothing happened after the young trees were planted.

"Right now we want programmes where we agree to plant trees just as we grow crops and then water them regularly so that in five years we will be getting firewood from these trees."

Encourage

His ministry would encourage afforestation and the use of wood until appropriate alternative forms of energy for the rural areas had been found.

Cde Makoni said the programme they were preparing for the promotion of planting and growth of more trees would be called fuel wood development.

"You do not have to cut down fuel wood indiscriminately. We will help each other to plan properly and learn to cut trees according to our fuel needs. That way we can plan the preservation of the forests."

He stressed that fuel wood could only be conserved if there was something to conserve.

Experts were also seeking a kind of tree that would grow quicker and burn longer than eucalyptus.

The solar-powered pump is capable of drawing 45 000 cubic metres of water a day and has a tank which stores up to four days' water supply for the 10 000 villagers in the area. Some villagers now have tapped water outside their houses.

Cde Makoni said that although solar energy was being harnessed to draw water from a depth of 25 metres there were also plans to determine how electricity could be derived from the scheme for the villagers' domestic use. The possibility of a grinding mill run on solar energy was also under study.

His ministry had been established to draw up a national policy on energy development and to investigate various possible sources of energy.

Wind, water, sun, wood and biogas had significant roles to play in raising the standards of living of ordinary rural Zimbabweans.

The ministry aimed at the best use of energy forms available from local resources so Zimbabwe could cut down on the cost of imported energy.

"This is why we will continue to build hydro-electric dams. We will also make more use of the power we get from Hwange, Sengwa and Chiredzi so that we need not rely on other people," Cde Makoni said.

Experts had informed the ministry that the coal reserves at Hwange were sufficient for the next 1 000 years, he said, "but then we have to think in terms of what will happen after those 1 000 years".

The assistant director of new and renewable sources of energy, Dr Ronnie Chivya, who accompanied the minister said the solar pump had been bought for \$48 000. The price included installation costs.

Villages within 2 km would benefit from the pump's water.

He was confident that in the next five years the cost of the solar cells would have been reduced considerably following recent strides in mass production.

INVESTING

"Everything depends on efforts being made in the field of solar energy technology. At the moment, those who are involved in the actual manufacture of solar cells are investing a lot of money in mass production to reduce the cost of the cells per unit watt.

"Right now the cost is between \$12 and \$14 per unit watt and with mass production, combined with extensive research, we hope the cost will come down."

The cost of solar equipment was primarily for the cells. He was hopeful that by the turn of the century the cost would have been whittled down to \$1 a unit watt.

"It seems expensive, but compared with a diesel pump it is not that much. According to 1980 figures we concluded that over the next six to seven years, we would have recovered fully the outlay."

The equipment installed at Shantu, he said, was virtually maintenance free. Two brushes which would need changing cost \$2 each.

CO-OPERATION

Cde Chivya said the decision to site the solar pump at Chiweshe had been taken after close consultations with the Ministry of Water Resources and Development. Another reason was that they wanted a pump in an integrated system.

"Chiweshe is also close to Harare and we wanted a site where policy and decision makers, as well as visitors from outside, could see the demonstration unit at work."

Cde Makoni urged the people to look after the pump, adding that if there was co-operation between the people and the Government, there would be hope for the future.

"If people refuse to co-operate with the Government, there is bound to be confusion. We will fail in our efforts and end up worse off than we were under our oppressors," he said.

The first counsellor at the French embassy in

Harare, Mr Bernard Lodiot, said there were two main projects that his government and Zimbabwe were discussing. These were on a hospital powered by solar energy and a solar energy plant.

The plant would be a joint venture between the two countries. It would contribute to research, production and the training of Zimbabweans in solar technology.

Implementation of the two projects, Mr Lodiot said, would serve as a demonstration of the friendly relations between France and Zimbabwe.

The Minister of Water Resources and Development, Cde Cephas Msipa, who was accompanied by his deputy, Cde Joseph Kaparadza, an MP for the area, announced that the French government was sending four engineers to work on the solar-powered projects here. They will be paid by their government.

Women in the Shantu area of Chiweshe wel-

comed the water pump, saying it had brought water supplies to their doorsteps. Mrs Esnath Mahodzwa said the project was a blessing to the women in the area and that they would ensure that children and animals were kept away from the pump.

Mrs Mahodzwa now gets domestic water just outside her house.

Another housewife, Mrs Sponia Muchadakuenda, said the pump would bring many benefits to the women in the area and that many programmes designed to alleviate the lot of the women would be realised as a result of the installation.

"Where we live, the wells dry up during the dry season and the people end up fetching water from the nearby river, where some of the people do their washing and bathing. So as soon as the pipes have been delivered to the area, we will dig trenches for the pipes bringing water to our houses," she said.

CSO: 5000/5793

ZIMBABWE

BRIEFS

DROUGHT WIDESPREAD--Bulawayo--The Minister of Water Resources and Development, Cde Cephas Msipa, has said some people in Matabeleland did not appreciate what the Government has done so far in providing water to the drought-hit province. Cde Msipa was speaking in an interview at the weekend after an extensive tour of water projects in Matabeleland. He said many people in the area believed that the Government should do more to help them. "Many of these people think drought has hit Matabeleland only. Yet drought is widespread and has covered a wider area throughout the whole country. "The people in Matabeleland want more and more help from the Government. But they do not show appreciation of what the Government has done so far for them. If only they could realise that ours is a service ministry that serves everybody," Cde Msipa said. [Text] [Harare THE HERALD in English 2 Aug 82 p 1]

CSO: 5000/5791

DENMARK

EXPERT URGES ENVIRONMENT MINISTER TAKE ACTION ON LEAD IN GAS

Copenhagen BERLINGSKE TIDENDE in Danish 18 Jul 82 p 1

[Article by Jens J. Kjaergaard]

[Text] Lead is much more dangerous than it was first thought. New studies show that pollution caused by car emissions makes children less intelligent. Against that background, Dr Philippe Grandjean, M.D., section leader at the Job Environment Institute, who will become professor of hygiene at Odense University starting 1 August, asked Environmental Affairs Minister Erik Holst to make an effort in EC to give member lands an opportunity to go over to leadfree gasoline.

The new studies, originating in the United States, Great Britain and West Germany, show that very small amounts of lead in the brain affect intelligence. Children become restless, their attention span decreases and they are apt to daydream. Unborn children are at least equally sensitive. Pregnant women should take precautions on the job, Dr Grandjean stressed.

Many Danish children are as exposed to lead as the groups studied by the foreign scientists. This will be confirmed by new Danish measurements being taken by an interdisciplinary team of doctors and psychologists.

Lead is not the only way to avoid engine knock. In Brazil, half a million cars run on alcohol made from sugar cane. Sweden is experimenting with wood alcohol. And the Americans are trying additives such as manganese. New cars can also use liquefied gas.

Philippe Grandjean is not blind to conflicts of interest. The oil branch owns the English firm, Octel, which produces lead alkyl for gasoline. And the European auto industry must anticipate stiff competition from the United States and Japan which have several years of experience with the types of engines that are now called for.

6578
CSO: 5000/2153

DENMARK

PAPER QUESTIONS CHARGES AGAINST CHEMICAL FIRM IN POLLUTION CASE

Copenhagen BERLINGSKE TIDENDE in Danish 4 Aug 82 p 6

[Editorial]

[Text] Denmark has the strictest environmental protection in the world--as some people like to boast. It is no more than 3 months since Folketing revised the law and made some changes to make it even more certain that pollution can be combatted effectively. Even so, Environmental Affairs Minister Erik Holst has more than hinted that he would like to propose an even stricter measure in the fall. The government will now consider doing something it decided against a few months ago. It does not seem very convincing and neither does the explanation that they just did not think it over before in the Environmental Ministry. The reason is that the environmental minister has learned that no charges can be brought against Cheminova, Inc. and its activities at Harboore Tange. The minister's police charge has been dismissed and naturally that made an impression on the minister, who is on the verge of saying that the law must be changed if it will not do what he wants it to.

The decision made by the Holstebro chief of police, following a lengthy investigation, referred to the fact that a number of conditions were outdated, which in itself would make it impossible to bring charges. But it is probably just as important that regardless of this, the chief of police stressed that the charge was untenable and that at no time were there criminal violations that could have led to a conviction. This is a statement that ought to lead to moderation of the often hysterical campaign against Cheminova, which has been depicted as one of society's big criminals. The decision can also encourage some politicians--and ministers--to be more restrained in backing every demonstration by environmental activists. The minister of the environment did not hesitate in his police charge to accuse not only the factory and local authorities but the Environmental Agency as well, but his basis for the charge has proved to be untenable.

There have undoubtedly been conditions surrounding Cheminova's production that must be regarded as unacceptable by today's standards and that would be criminally liable if they were maintained. Environmental reform was not put into effect until the middle of the 1970's and it would be naive to

think that it would not take a long period before adjustments to the strict requirements of the reform could be implemented. Even so, politicians have been constantly working to intensify the war on pollution with the result that it has been increasingly difficult to live up to the requirements for both business people and the administration.

No one supports pollution and no one would refuse to sacrifice a lot to combat it. But it would not be reasonable to sharpen the strict legislation even more just because the environment minister cannot get his hands on Cheminova. There are enough tasks within the existing limits and the minister should stop and think more than once before he asks Folketing to change the laws once again.

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CSO: 5000/2153

DENMARK

BRIEFS

POLLUTION THREATENS SPRUCE FORESTS--Precipitation containing sulphuric acid is suspected of being the cause for serious harm to Danish spruce. The Forestry Technical Institute in Copenhagen has made known that in the course of the last couple of years there has been a growing number of diseased spruce throughout the whole country. The needles of the trees are discolored or fall off, and several investigations are going on at the moment to determine the cause. The Forestry Technical Institute suspects that the so-called acid rain, sulphuric pollution from power plants and the chimneys of other industries, are the primary causes. But work is also being done to climatic conditions since many causes of affected trees occur immediately after periods of heavy downpour followed by strong warm periods in the early summer. "It can be blamed on the fact that the trees are simply unable to absorb enough moisture to withstand a strong heat wave," says Lars Kjaerbolling, a consultant in the Forestry Technical Institute. In the last few years Norwegian spruce, primarily Christmas trees, valued at about 100 million kroner, have been exported to West Germany and Sweden. [Text] [Copenhagen BERLINGSKE TIDENDE in Danish 5 Jul 82 p 7] 6893

CSO: 5000/2136

ATHENS MAYOR INTERVIEWED ON POLLUTION

Athens ELEVTHEROTYPIA in Greek 15 Jun 82 p 9

[Interview with Mayor Dimitrios Mbeis]

[Excerpts] The first citizen of Athens, Mayor Dimitrios Mbeis, together with the director and vice president of the Environment Center and Committee of the City of Athens, Mr. Dimitrios Geroukalis, answered the following questions put to them by us:

Last April you had organized the first march and rally aimed at mobilizing the people against the smog. Do you plan something similar this year?

Before the change of governments the Environment Committee of the City of Athens was highly visible. Now it does not make itself heard. What does this mean? That the problem has been solved? That something is in the works and about to be submitted to the proper governmental agencies?

What is happening with the Center for the Environment of Athens? Is it operating and does it analyze fruit and vegetables being consumed in Athens as it had been declared at the opening of the Center last fall? How many analyses of products have been made since then and what was their result?

What was the size of the green area when you took over as mayor and how far have you gone at this time?

We received these answers:

"Yes, last April, at the initiative of the City of Athens and the surrounding municipalities as well as of many scientific unions , the large popular rally and protest march took place because the government then in power could not decide about proceeding to take the necessary measures against the smog..."

"With the new government it was natural to give to the responsible minister the time necessary to study the way to implement the measures which they and their staffs will want to implement. We are aware that the machinery of governmental agencies would be an additional obstacle to every action."

Dim. Mbeis... Severe Measures

Mr. Mbeis considers very proper the measures in force during the days of alert and

as a positive step for the creation of new stations to measure pollution. At the same time he adds:

"These measures alone are not satisfactory. Many others are needed about which we do not know the outcome. In order to save Athens, drastic measures are needed. For this reason we are awaiting with great interest to see how the situation will be faced. If not satisfactorily, then the Environment Committee of the City will again place itself at the head of new actions and, if the need arises, of new popular mobilizations.

"We emphasize that the statements the premier, Mr. A. Papandreu made, express the seriousness of the situation..."

"As has already been announced, the lawsuits brought against the City for the location of the EAT-ESA have been dismissed and thus the trees have won over the hotel which was being planned by those who opposed them.

"Our Garden Department has been set up in the Goudi National Park, and in cooperation with the Ministry of Public Works, is building a large nursery where plants and trees will be cultivated for planting in the squares, the groves and the streets of Athens. It is our intention and hope for this nursery to grow so much in order to be able to distribute seedlings and plants to the residents to plant in their yards and lawns.

"In the forty months of our term we planted 310 new rows of trees in all sections of the city. With the completion of the works we mentioned we will have more than doubled the areas of greenery in the city."

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CSO: 5000/5334

GREECE

LARGE FINE FOR THESSALIA FIRM FOR POLLUTION

Athens ELEVTHEROTYPIA in Greek 25 Jun 82 p 14

[Text] A fine of 200,000 drachmai was imposed by the Ministry of Industry on the Khalyvourgia Thessalias [Thessalia Steel Mill] because it had avoided, by continuous postponements since 1977 installing cleansing filters for the gases produced by the smelting of scrap iron in electric furnaces.

It is reported in an announcement by the deputy minister of Industry, Mr. D. Pitsioris, that the last deadline which had been given to the company by the New Democracy government expired on 20 May 1982.

The company asked for but did not receive, a new extension and, as a matter of fact, showed an agreement with a foreign company for the delivery in nine months of a filter complex.

As is known, 6 October 1982 is the expiration date of the deadline for equipping all units with the proper filters which will contain the emission of particulates within the internationally accepted limits.

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GREECE

NEW LAW ON FINES FOR INDUSTRIAL POLLUTION

Athens TA NEA in Greek 23 Jun 82 pp 1, 4

[Text] Very severe administrative fines which may reach up to ten million drachmai are to be imposed on violators of the regulations to combat air pollution as provided by a legislative act published in the government gazette.

In the specific article it is decreed that those who violate the restrictive measures referred to in the act (they have already been published in NEA) will be liable to penalties imposed by decision of the responsible governor of the Nome in the form of an administrative fine of up to 800,000 drachmai unless a more severe penalty is contemplated by special provision. The above administrative penalty will be imposed on violators in the Attiki Nome by the Minister of Urban Planning and Environment.

It is to be noted that in cases where a deadline of compliance has been set and the involved party has failed to comply, a fine of up to 300,000 drachmai for every day of violation of the deadline can be imposed.

Finally, in cases of severe pollution by the operation of industrial, manufacturing or quarrying enterprises or by other sources of open fires during a period of emergency measures, the Minister of Urban Planning and Environment, in conjunction with the minister having jurisdiction over the specific case, can impose a fine of up to ten million drachmai. At the same time, for the same reason the minister having jurisdiction can go as far as to revoke the permit of operation of the facility causing the pollution, if such permit is necessary to comply with a specific order.

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CSO: 5000/5334

GREECE

NEW PLANTS TO INCREASE POLLUTION

Athens I AVGI in Greek 1 Jul 82 p 3

[Excerts] As of yesterday noon private automobiles began once more to circulate freely all over Athens, without the zone restrictions and the odd-even days. The officials responsible will investigate, as the government assures us, the effectiveness of the restrictive measures on private automobiles and will determine the contributing factor of cars to air pollution. As of today the other set of measures regarding the curbing of operations of polluting industries goes into effect for the two-month period July-August.

All these steps, regardless of whether they are effective, whether they are considered to be positive or denounced as casual, indicate that there is at least some political desire to fight the smog.

In the meantime, according to charges of hundreds of residents of the Perissos area, scaffolds have been erected at this moment on Vizandinon Avtokratoron Street to begin construction for the extension of the Lekka plant, a fact which means that one more aggravating factor will be added to the already industrially "saturated" area to downgrade the environment where thousands of families and children live.

It is to be noted that in the same area, which is considered "choked" by industries, and moreover, on Vizandinon Avtokratoron Street alone there operate the following industrial units: 1)Dyeing-Finishing Mills. 2) "Triumph." 3)Thread -spinning Mill "Eriotek." 4)Thread-spinning Mill "Lekka." 5)Thread Mills Attikis Ltd., while there are many more industries in the surrounding area which, with the pollution and the noise, have made life unbearable for the residents.

The municipal authorities of Nea Ionia showed that they understood the frightening problem facing the Perissos residents, by promising to exert every effort in order to eliminate, as much as possible, any activity which adversely affects the general interests of the area.

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Cso: 5000/5334

GREECE

INDUSTRIES TO HELP CLEAN UP PATRAS POLLUTION

Athens I KATHIMERINI in Greek 27-28 Jun 82 p 2

[Text] The immediate installation of biological and chemical purifiers in the outlets of industrial wastes of Patras, the clean up of 3.5 kilometers of shoreline and the establishment of a definite timetable for the adoption of environmental protection measures, constitute the basis of an agreement which appears to have been reached between four Patras industries and the plaintiff, Mr. Vl. Velloopoulos.

According to our sources, the industries which were recently found guilty of polluting the waters of the Gulf of Patras, have accepted to meet with the local groups who, for the past four years have been struggling to protect the gulf. The talks lasted one week (they began Sunday) and were concluded day-before yesterday with final decisions which will be announced in a special communique of 5 July.

The plaintiff, Mr. Vl. Velloopoulos will be the spokesman at this meeting. He filed suit against the VESO, Peiraiki-Patraiki, Ladopoulos and Viomikhania Dermaton [Tannery] industries. After the formulation of the demands (based on the installation of biological cleansing equipment, the clean up of the shoreline at the expense of the industries, and the timetable for the enactment of measures) a representative of the corporations will speak. Following that, groups of scientists and specialists from the two sides will examine the proposals prior to issuing a joint announcement.

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GREECE

COMMUNITY SPECIALISTS ISSUE POLLUTION CONTROL IDEAS

Athens ELEVTHEROTYPIA in Greek 15 Jun 82 p 9

[Text] The Association of Greek Transportation Experts, having studied in all its aspects the transportation problem of the capital, suggests that the following resolutions-options be taken as the basis of the additional application of measures:

The unification of the executive agents of public transportation under local self-government.

The implementation of a five-year and ten-year program of decentralization in order to establish the boundaries of the sources of traffic.

The SES [Association of Greek Transportation Experts] considers necessary the measures now in force such as the odd-even days of circulation although it believes that only the development of public transportation can bring more positive results. Contributing to the solution would be:

The reorganization and expansion of the bus lines network.

The development of an urban railway (Metro).

The suburban railway system.

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GREECE

BRIEF

FACTORY POLLUTION--The continuing pollution of the air by the operation of the "ELSA" plant which creates serious problems for the residents of Aspra Khomata was denounced by telegram by the mayor of Nikaia, Mr. Logothetis who also charged that police authorities prohibited him and the municipal councilmen of the Rendi municipality from entering the plant for an on the spot investigation of the pollution sources in the factory. [Text] [Athens TA NEA in Greek 23 Jun 82 p 4] 9731

CSO:5000/5334

NORWAY

MINISTRY OFFICIAL DENIES ENVIRONMENT EFFORT BEING WEAKENED

Oslo DAGBLADET in Norwegian 22 Jul 82 p 2

[Article by Kjell Wikstrand, personal secretary for Minister of Environmental Affairs Wenche Frogner Sellaag: "No Weakening of Environmental Policies"; passages enclosed in slantlines printed in italics]

[Text] In DAGBLADET on 14 July 1982 Liberal Party leader Dorum attacked the Conservatives' environmental policies and Minister of Environmental Affairs Wenche Frogner Sellaag. He took up four points in which he could see "disturbing signals." I regret having to say that Dorum either has interpreted the "signals" incorrectly, or has allowed himself to position his party on environmental questions without regard to the factual grounds for his criticism.

I shall briefly go through the points in which Dorum says that he has seen disturbing developments.

Measures Against Noise

It is /not/ correct that the government has postponed measures against traffic noise. However, appropriations for this purpose have always been low since the beginning in 1978. In the report on product control work the government pointed out that:

/"With the tempo so far, it will not be until the turn of the century before there can be reasonable noise suppression along the national highways."/

How Dorum can turn this sober statement into a desire for downgrading of priority is difficult to understand. The government has not opposed the idea of fees on noisy motor vehicles. The question of fees (and other measures against noise) is being considered in the interdepartmental automobile pollution committee, and the department will not bring up the issue before the committee has expressed itself.

Chemical

Dorum suggests that the government has deliberately delayed and impeded regulations about chemical substances and materials and that the government has failed to follow the unanimous demands of Storting committees. There has been work for many years on new regulations for chemical substances and materials. This work was /not/ finished when the present government took over. Regulations will have great importance for the workplace and product control. It is therefore of decisive importance that the regulations be as good as possible from the start. As with the previous government, this government does not desire to make a rush recommendation. We expect to have the regulations ready in the fall. For the record I must say that Norway is going to impose its regulations before the EC is ready with its own regulations. Dorum is therefore mistaken when he says that we are "waiting for the EC."

Pollution

Dorum claims that the government has advanced a proposal which means that the pollution law will be weakened. He claims that the most important thing is that the authorities are now giving up trying to raise the norms and standards for what should be acceptable limits for emission of poisonous substances and products.

Dorum's statement of the problem is wrong, and therefore difficult to comment on. What Dorum probably means is the recommendation for change in Section 8 of the pollution law. The recommendation includes only pollution which does not contain damage worth mentioning or inconvenience--not, as Dorum claims--emission of poisonous substances and products. The change is meant to be a reorganizing benefit for the pollution authorities. I believe it is important that pollution authorities concentrate on emissions which it is important to stop or reduce. The recommendation for change does not contain any modification in the goal of reducing emissions. Finally in that connection, I want to emphasize that the recommendation for change that Dorum pointed out is only one of a number of recommended changes, and that they all must be considered together.

Acid Rain

Dorum tries to create doubt about the judgment ability of the environment minister about the extent and seriousness of the problems of acid rain, and the Stockholm Conference on the acid environment. He gave no actual facts about the acid rain policies, however. Dorum should learn the golden rule about hitting the ball, not the player.

Even though Dorum is trying to smear the results of the Stockholm Conference this year, it is a fact that the conference was a clear success for the fight against acid rain. But to understand that it must be seen in connection

with how international opinion was only a couple of years ago. The Stockholm Conference showed clearly that acid rain now, compared with previously, is accepted by most west and east European countries as a /very serious/ environmental problem. There was also agreement at the conference that within the framework of acid rain a convention is necessary with consultations to work out combined programs for reducing sulfur emissions, and that such concrete efforts must be put into effect as soon as possible. A further confirmation of the change of international opinion was given during the environmental ministers' visit to East Germany previously this month. From the Norwegian side we emphasized the acid rain problem. On their side the East Germans showed understanding of our viewpoints and agreed to a close technical cooperation with Norway on the problem.

East Germany, which per capita has the most sulfur emissions in Europe, has also started tests with technical equipment to prevent acid pollution. Dorum's pessimism is therefore exaggerated.

The point of departure for Dorum's article is that the environmental policy is a part of and will pay for the Conservative Party's tax promises. What is correct is that the Ministry of Environmental Affairs, like the other ministries, must take its part of the reductions which are necessary to get an overall budget balance in a very difficult economic situation.

The opposition, including Dorum, has for a long time been preoccupied with claiming that all the announced reductions in the public sector are due to the Conservative Party's tax promises. If that were the case the amount of the tax reduction would be so great that nobody in this country would have to pay a national tax in the coming year.

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END